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**RENDEZVOUS
in ROATAN**
The Caribbean as it Used to Be

**CANADIAN ISLAND
GETAWAY**

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THIS ISSUE PD REVIEWS:

- Submersible Systems Spare Air
- Tabata Gear Bag
- Underwater Kinetics Q40 Light





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DIVER

VOLUME III

NUMBER 5

MARCH/APRIL 1991

FEATURES

PICTORIAL

The underwater world, seen through the eyes of our readers.

12

CANADIAN ISLAND GETAWAY

Canada's Gulf Islands offer plenty of prime diving as well as a respite from the rat race.

20

By Ed Weber

WOMEN AT DEPTH

You've come a long way ladies, and sport diving is much better because of it.

27

By Stacey & Darren Douglass

IN SEARCH OF THE "STONE OF HEAVEN"

You can find a special kind of treasure at a rugged little California dive site called Jade Cove.

32

By Bruce Watkins

THE RESCUERS

Volunteer members of the Whale Rescue Unit put it on the line to save marine mammals entangled in nets.

36

By Joe Belanger

RENDEZVOUS AT ROATAN

No fancy high-rises, there aren't even any phones. This is clearly the way the Caribbean used to be.

44

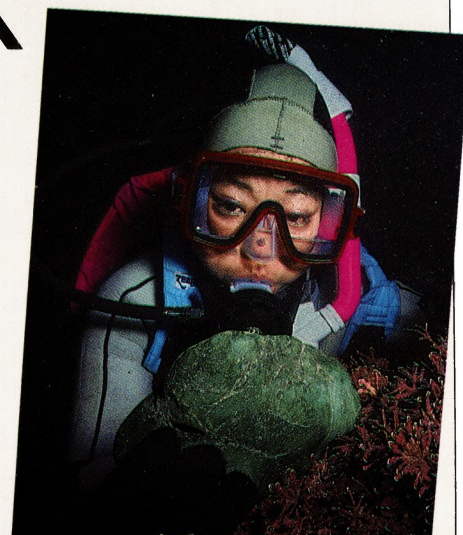
By Ed Weber

HOW TO PUT ON A BLOCK-BUSTER SLIDE SHOW

There's an art to projecting slides. Follow these tips for a "thumbs-up" presentation.

54

By Nancy Sefton



ON THE COVER

Diver displays her find at NorCal's Jade Cove. Photo by Bruce Watkins.

COLUMNS

LOGBOOK: Dive Stories from our Readers

Van Nuys, California, diver takes a "shark dive" at a deserted isle off the coast of Colombia.

26

By Judy Wade

SEA LIFE

Marine science-related diving is so much fun, ever thought of making a career out of it?

39

By Dr. Tom Garrison

OCEANS

We would not be able to enjoy many of this world's favorite diving grounds were it not for the creation of the Caribbean Sea.

41

By Rick Baker

INSTRUCTOR'S CORNER

Take the sting out of your beach diving with some tips from a veteran sand shark.

49

By Darren Douglass

S.O.B.

There's an art to keeping warm on a dive boat.

51

By John Francis

DEPARTMENTS

EDITORIAL

7

LETTERS

8

DIVERS UPDATE

15

DIVE TRAVEL NEWS

52

READER SERVICE

53

DIVE BOAT SCHEDULES

56

PRODUCT REVIEWS

59

Sub. Systems Spare Air

Tabata Gear Bag

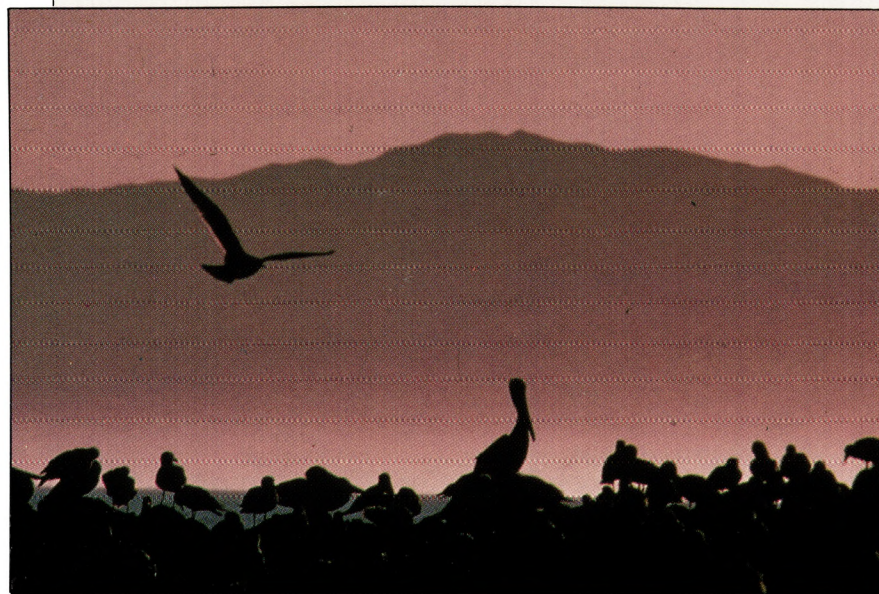
U.K. Q40 Light

ADVERTISER'S INDEX

60

FOCUS ON: Sheephead

62



page 12

TUSA

NEW LIBERATOR XTEN

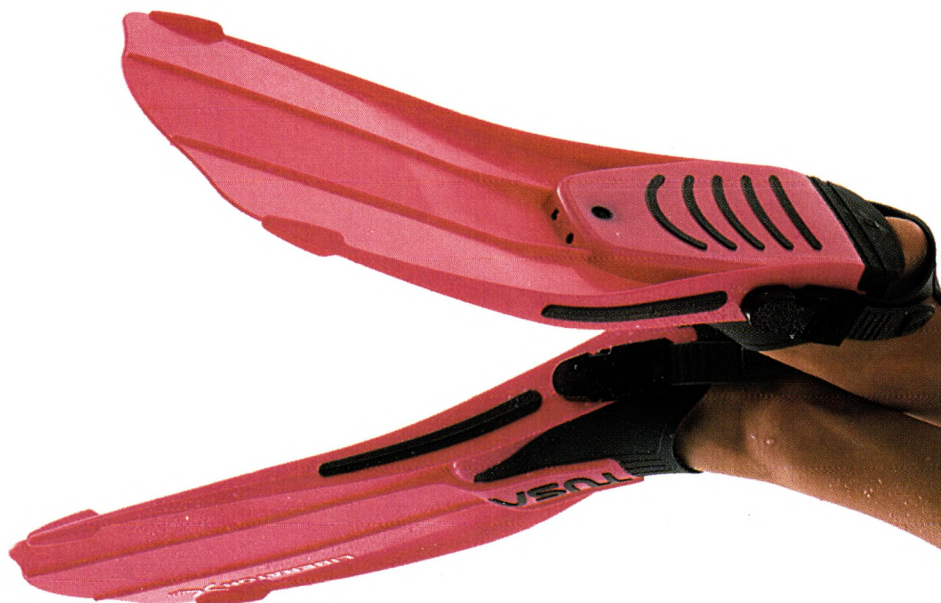
REVOLUTIONARY FLEXIBLE DESIGN



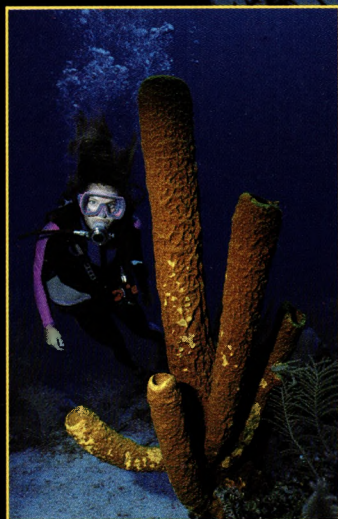
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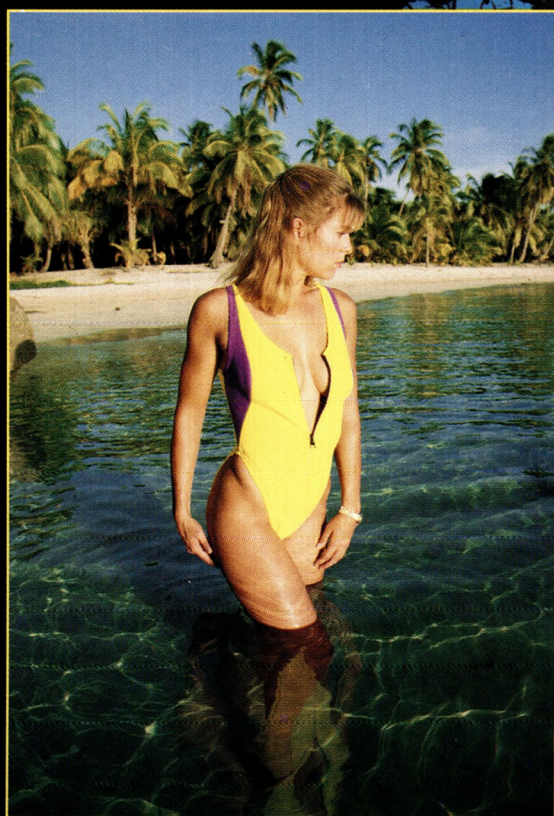


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Bret Gilliam
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Advertising Offices:
3197-E Airport Loop Dr., Costa Mesa, CA 92626; (714) 546-4370; FAX (714) 662-3486.

PACIFIC DIVER Magazine is published by Western Outdoors Publications. Other affiliated publications are *Western Outdoor News*® and *WESTERN OUTDOORS*® magazine.
Subscriber service, change of address, P.O. Box 2027, Newport Beach, CA 92659-1027, telephone (714) 361-9765.

PACIFIC DIVER is published bi-monthly by Western Outdoors Publications, 3197-E Airport Loop Drive, Costa Mesa, CA 92626. Second class postage paid at Costa Mesa, CA, and additional mailing offices.

POSTMASTER: Send address changes to PACIFIC DIVER, 3197-E Airport Loop Drive, Costa Mesa, CA 92626.

SUBSCRIPTION RATES: Single copy \$3.00 published bi-monthly, 6 issues (one year) \$14.95, 12 issues (two years) \$24.95 and 18 issues (three years) \$34.95. Subscription outside of U.S. add \$8.00 postage. Paid orders in U.S. funds only.

EDITORIAL

Letters? Boy, do we get Letters!

Some publishing guru once said that the true measure of a magazine can be found in its letters.

Based on that premise, I guess PACIFIC DIVER is standing pretty tall. Because, boy, let me tell you, we get letters. Not that I'm complaining. Receiving letters is the second best part of my job (the *best* part being, of course, getting to travel to all those great dive destinations and then handing the bills over to my boss).

With the exception of *Skin Diver* magazine, PACIFIC DIVER has more readers in the western United States than any other diving publication, and from the size of our mailbags it seems almost everybody has an opinion that they're not shy about sharing. Like the guy from Seattle who writes, "PD is the greatest! But come on, knock off all that hunting crap!" Or the woman from New Orleans who writes, "PACIFIC DIVER is my favorite diving magazine, but you don't run enough hunting stories!"

Since it's all a matter of perspective, I guess they're both right. But what's significant is that they care enough about "their diving magazine" to tell us what they think in the first place.

Based upon the number of conversations I have via the mail and the telephone as well as face-to-face, there are a lot of divers who consider PACIFIC DIVER to be their personal diving magazine, and who therefore take a personal interest in what they see or don't see on its pages. And I think this is great, because the bottom line is, friends talk to friends, while strangers pass without speaking.

Too many magazines these days feel as if they were put together on an assembly line. They have all the right ingredients — pretty pictures, coherent words, flashy advertising — but something always seems to be missing.

I submit that what's missing is, simply, some personality.

I think PACIFIC DIVER has its own personality, like it or not, and I think that's

what compels readers to form such a strong attachment to it. Our staff is small, we're all avid divers, we don't take ourselves too seriously, and we're dedicated to the propositions that honesty is always appreciated and a little humor never hurts.

Readers' willingness to drop us lines to tell us what they think says to me that while they may not always agree with what we're doing — or even like what we're doing, for that matter — at least they recognize that we are trying to offer them something different in a dive magazine, and by sharing their comments they are helping us to succeed in our task.

Now I will probably be criticized for saying this, but a long time ago the granddaddy of dive magazines created a system of doing things that has become standard operating procedure in the diving industry, and a lot of pressure is put on other diving magazines to behave in a similar manner, or to "toe the line" as it were.

Here at PACIFIC DIVER we have a tendency to ignore this line, an attitude which keeps us in hot water. However, most PACIFIC DIVER readers seem to enjoy this and, hey, we kind of like it too, so what the hell, that's what we're going to continue to do.

So thanks to you all for your support and your loyalty. We'll keep dancing to a different tune, and if we ever tire of the tempo and start to backslide I'm confident that you will descend upon us, an angry mob with torches flaming and snarling dogs straining at their leashes, to lead us back onto our proper path.

And that's good. Your comments and criticisms keep us awake and alert. Whether you're patting us on the back or beating us profusely about the head, you're keeping our jobs here at PACIFIC DIVER from being dull. And we all know that in diving, as in life, dull is a drag.

John Brumm
Editor

Yes, There IS Room in This Industry For Honest Dialogue

What a pleasure it was to read the letter (January/February 1991) from Donald Rockwell, executive vice-president of Sea Quest Inc., regarding your recent review of the Explorer BC. Sea Quest's fast and responsible reaction to your critical comments concerning problems with the Multiset cummerbund "Quick Clips" on the Explorer was impressive and restored my faith that at least some of the diving manufacturers out there are keeping an ear tuned to their diving consumers. Instead of pooh-pooing your very honest and straightforward review, Sea Quest took immediate steps to not only rectify the problem, but made the changes available to current Explorer BC owners as well!

This has demonstrated two things to me. First, after 30 or so years of glowing equipment reviews from *Skin Diver*

magazine where every new product is going to "revolutionize the diving industry" and every reviewed product also has a large advertisement nearby, PACIFIC DIVER's new product reviews are an honest breath of fresh air. They are obviously not tied to advertising dollars. Divers are not dumb and, as for myself, I stopped believing in (and reading) *Skin Diver's* product reviews long ago, seeing them for what they are, perks for their advertisers. I commend PACIFIC DIVER for taking the high road, and for risking the ire of potential advertisers for the betterment of divers like me.

Secondly, this dialogue demonstrated that there are responsible manufacturers out there willing to let their products be tested by an unbiased source, and willing to listen and act on the feedback they receive. Sea Quest did not try to downplay the problem with its BC, but pre-

ferred instead to take rapid steps to improve a product they seem to be quite proud of.

Sea Quest has certainly got my attention. While I am not in the market for new gear right now, you can bet that when I am, I will take a close look at Sea Quest's products. The company has shown a true interest in customer support.

Obviously, there is room in the sport diving industry for honest dialogue between manufacturers and the sport diving public, and I join with thousands of other divers in applauding your publication. Finally, product reviews I can trust!

Looking forward to the next issue!

Dick Shine
Napa, CA

Say it Ain't So, Ray!

In your January/February 1991 issue Mr. Ray Contreras responded to a drysuit article that appeared in your November/December 1990 issue.

Mr. Contreras forgot to mention in his letter that he is the sales rep for O.S. Systems (a drysuit manufacturer), and he also forgot to mention he owns a dive shop here in Tacoma.

Shame on you, Ray — not very professional.

Jerry Martin, Owner
Northwest Divers
Tacoma, WA

Take That! Greenpeace

I would like to take this time to inform you as to why I will *not* be subscribing to your magazine.

After reviewing my complimentary issue of PACIFIC DIVER (November/December 1990), I found a public service advertisement which quite frankly annoyed the microbubbles out of me!

I am not at all surprised that a magazine published on the "left" coast would consider printing something as absurd as the statement on page 42 by those self-righteous, freeloading, militant, environmentalist wackos from Greenpeace. Where in hell do these environmental terrorists get off telling me that I'M responsible for the Valdez oil spill? This epitomizes the typical ultra-liberal approach to any prob-

lem, i.e. blame any and all for an incident except the guilty party.

The next time Greenpeace comes knocking on your door, you might want to remember how oil is "wastefully" used in the diving industry:

- Boat fuels (which I hear they need to run their pimp barges).
- Synthetic fibers (probably used in their clothing, since it isn't made from animals).
- Plastic and rubber materials (incorporated into those donated Zodiacs they tool around in).
- Automobile fuels used by the postal service to deliver your periodicals and used by divers to get to and from dive sites, shops and boats.
- Airplane fuel to get to those wonderful dive sites your magazine vividly describes.
- The very ink used in publishing your magazine.

By printing their ballyhoo, I must assume that PACIFIC DIVER agrees with the Greenpeace "philosophy." You can tell them I'm doing my part to appease them by NOT subscribing to a magazine which encourages the wasteful use of oil through sport diving. This will save a few trees, a few drops of oil, a few cubic inches of landfill space and a few metal staples which are probably destroying this planet in some heinous way.

Get the picture? When enviro-nazis like Greenpeace try to intimidate their way

into society (through the use of charitable contributions and donated funds, no doubt), we will all be affected in some manner. You don't believe me? They just lost you a customer!

Cancel my subscription and give me a call when you decide to stop backing screwballs like Greenpeace.

Michael Muro
Keasbey, NJ

Try to have a nice day, Mike. — Ed.

Needs More Info on Dolphins

I was fascinated with both the article on dolphin swim programs (September/October 1990) and the follow-up commentary (November/December 1990) by Rick Moore of Cupertino, California. Mr. Moore expressed a desire that his phone number and address be given out to readers who wished to speak with him personally to obtain more information on dolphins and dolphin swim organizations.

Like Mr. Moore, I am also a filmmaker, and I would like to hereby request his telephone number and address so that I might begin to better understand both sides of the issue.

Christopher Carson
Playa del Rey, CA

Since Rick Moore didn't specifically give us permission to print his address and phone number, we've dropped them in the mail to you. Anybody else interested in contacting Rick need only ask and we'll send along the necessary information. — Ed.

Hey, Where's the Spear Gunner?

As the owners of the *Spear Gunner* charter dive boat we read with interest your article "Border Town Diving" (January/February 1991). The subject of the article — Mexico's Coronados Islands — is definitely must-see diving for any serious diver visiting the San Diego area.

The article listed six pac boats that depart San Diego for the Coronados, but, unfortunately, the *Spear Gunner* was omitted; however, the author did include a great picture on page 52 of divers having fun on our boat at the Mexican Amphibious Infantry outpost on South Island.

The *Spear Gunner* departs from the San Diego Princess Resort on Mission Bay and operates seven days a week. In addition to the Coronados we offer half-day trips to Wreck Alley and the kelp forests of Point Loma and La Jolla. For additional information and reservations divers can call us at (619) 486-3402.

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Let Me Show you What I can Do

Let me start off by telling you how very impressed and pleased I am with your magazine. I always enjoy the well-written articles and fabulous photographs, but best of all it keeps me up to date with what is happening in diving around California. I recently came upon an old issue (August '89) in which I read an article about the Catalina Island Marine Institute (CIMI) and its Catalina Sea Camp program. I was very pleased to find that such a program exists to help educate the next generation of divers on how to appreciate and preserve our fragile marine environment.

I would be very interested in working for CIMI this summer if possible. I have been NAUI certified for eight years and recently went through training as a SSI Dive Control Specialist with Curt Wiessner at Aquatics of Santa Barbara. I am also presently enrolled in the Marine Technology/Recreational Diving Specialist program at Santa Barbara City College. I will be certified as a NAUI assistant instructor this spring. I would really appreciate it if you could send me the address of CIMI and anyone else who might be interested in hiring someone with my training and experience. I would like to gain as much experience as possible in the diving industry, as I hope to make it my profession.

I look forward to many more exciting and interesting issues of *PACIFIC DIVER* magazine, and I hope to hear from you

soon. For anyone interested, my address is 6610 Sabado Tarde, Goleta, CA 93117.

Brad Doane
Goleta, CA

The address of CIMI is on its way to you. With your background and enthusiasm, there's no doubt a place for you in sport diving. — Ed.

Dri-Flex? Dri-Flex Who?

I am hoping you can assist me in some way with problems I'm having with my drysuit.

I purchased a Dri-Flex drysuit in May of

1989. The first year I used it I loved it. Then I started having a problem with leakage. The problem seemed to be the dump valve — there was something wrong with the way the spring and a plastic part inside were seated. Later I realized the plastic part was breaking up and I think the particles were getting into the membrane seal.

Then I realized the valve was not the entire problem (as I discovered more wet areas). I turned the suit inside-out and filled it with water to find out where the water was coming from. To my surprise, I

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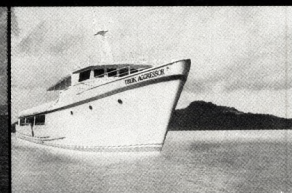
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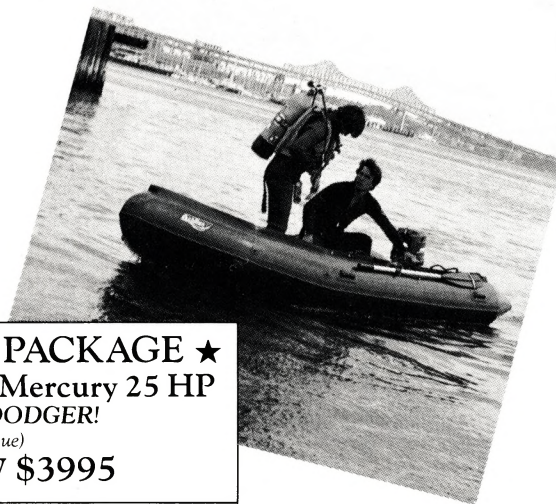
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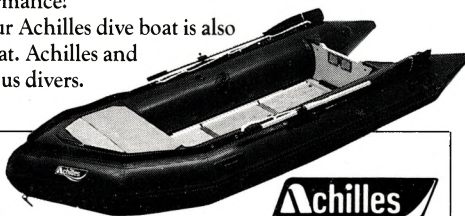
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Achilles

LETTERS

found a lot of pinholes in the arms and legs of the suit, so I put Aquaseal on them.

As if this weren't enough, my wrist seals split, not across the seal rings as a result of being dried out and cracked, but parallel to the seal rings, as if the material between each ring was weak.

Several months before I purchased my suit, Dri-Flex was purchased by D.U.I. in San Diego. So I gave D.U.I. a call to find out about repairs. I was going to have all the seals replaced as well as get a leak check. While talking to someone in the repair department about the leaks I was told that some Dri-Flex suits had been made with defective materials and that if the company hadn't been purchased Dri-Flex would have had to make good on my suit. I was then told that D.U.I. wasn't honoring Dri-Flex warranties.

This doesn't seem fair to me. D.U.I. already owned Dri-Flex when I bought my suit; if the company wasn't going to back up the warranties on its Dri-Flex drysuits, D.U.I. should have pulled the suits off the market.

Now I've got a suit with bad seals that's constructed with defective materials that will probably keep springing leaks. At \$93 to replace the seals and \$43 for each leak check (plus leak repair costs) these material defects are going to cost me a fortune. As for the plastic part in the dump valve, D.U.I. doesn't stock replacement parts for it.

I can't afford to throw this drysuit away (with only about 50 dives on it) and buy a new one. So what can I do? I'd appreciate any help you can give.

Lynne Robinson
Hawthorne, CA

We contacted D.U.I. for a response. The promised reply did not arrive before press time, so hopefully we'll have some D.U.I. comments to share in our next issue. — Ed.

And Now for a Few Nice Words...

We loved your Kauai article in the January/February 1991 issue. Our first tropical dive was with Ken & Linda Bail on *Bubbles Below* back in '84. We had a wonderful time and now you've made us want to go back. Thanks for a great magazine.

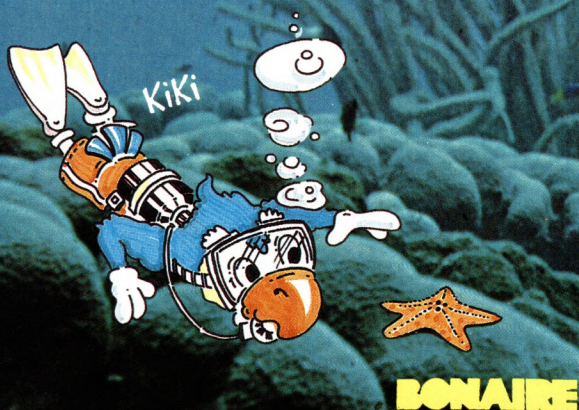
Joan Wayne
Napa, CA

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For information on Bonaire, send your request to ALM Antillean Airlines, Bonaire Brochure, P.O. Box 10338, Riviera Beach, FL 33419-0338. For information on Bonaire diver and non-diver packages, see your travel professional, dive shop or dive tour operator.

The 5-Star Airline to Bonaire

Schedules subject to Government approval.



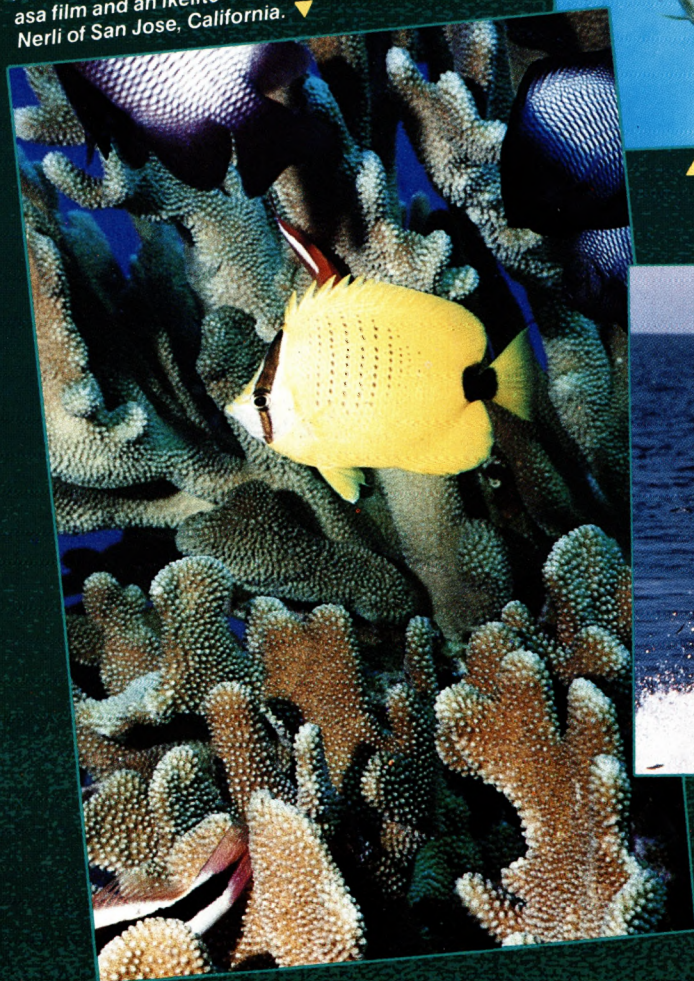
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▲ A translucent lion nudibranch plies the chilly waters of Thomsen Harbor, Alaska. Photo by Ernest Manewal of Sitka, Alaska.

Lemon butterflyfish cruises the coral along the coast of Maui. Taken at a distance of three feet with a Nikonos V (set on manual and f8), a 28mm lens, 200 asa film and an Ikelite "MV" strobe. Photo by Jim Nerli of San Jose, California. ▼



▲ Diver gets caught in a fish "feeding frenzy" at Koloa Landing on the Hawaiian island of Kauai. Photo by Joel Schulman of Sherman Oaks, California.



▲ A humpback whale lunge-feeds near Santa Rosa Island. This image was the grand prize winner in the amateur division of the Channel Islands National Marine Sanctuary's Images '90 photography contest. Taken with a Nikon FM2 and a 180mm lens. Photo by Larry Kepco of Goleta, California.

if

you've taken photographs that you feel represent the diving lifestyle, and you'd like to share them with other divers, we invite you to submit them to PACIFIC DIVER for possible publication.

Pictorial

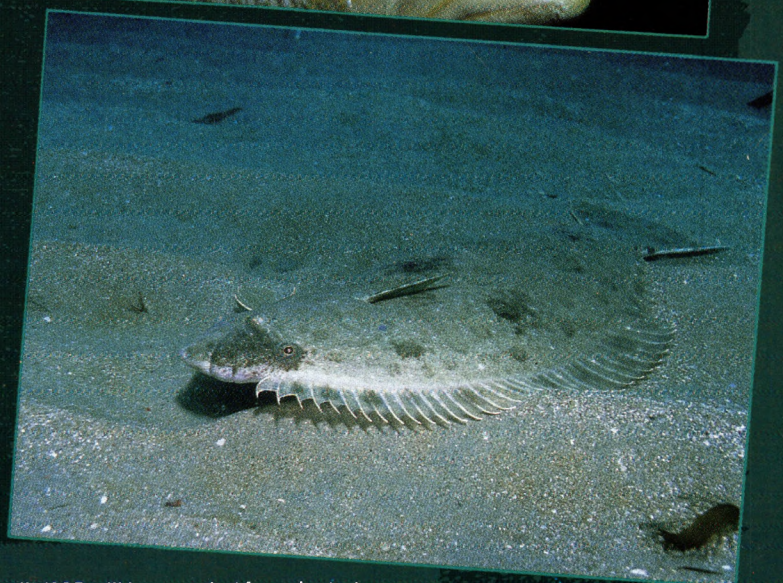
Take my picture too! Photo by Hal Beral of Irvine, California.



Night divers encounter an octopus relaxing on the sand bottom in the waters off Cozumel. Taken with a Nikonos system and a 28mm lens. Photo by Dorothy Cutter of Morro Bay, California.



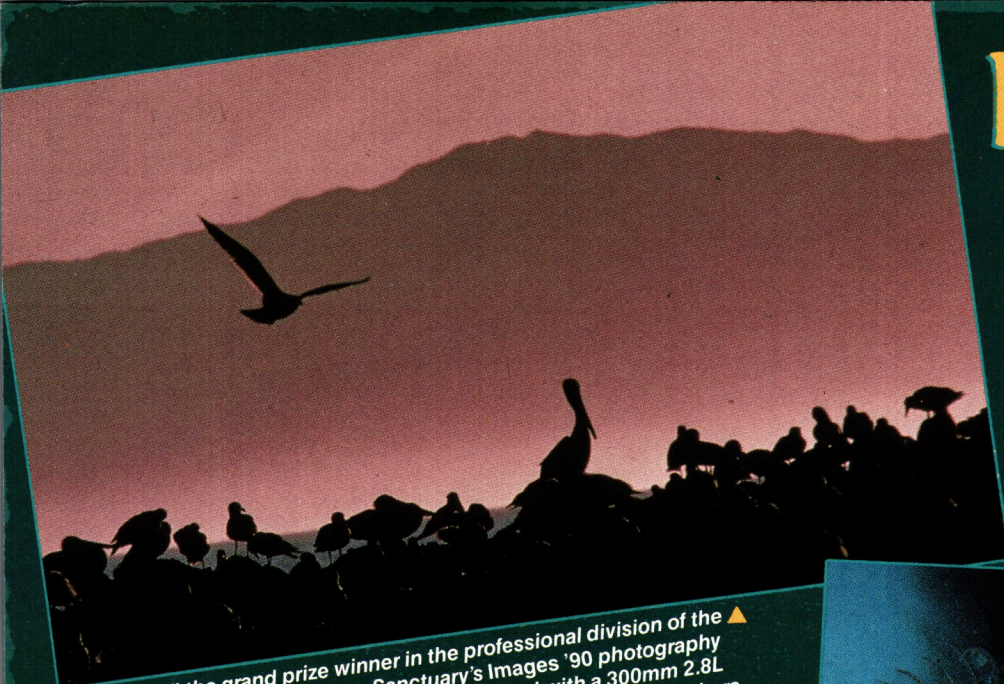
A plump harbor seal keeps an inquisitive eye on divers visiting a Channel Islands kelp bed. Photo by Jim Knowlton of Santa Barbara, California.



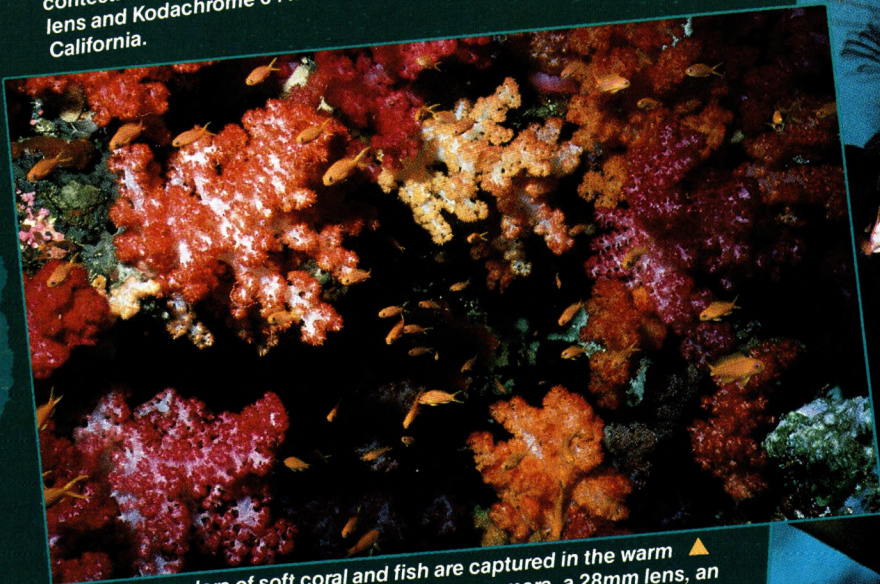
Hefty 20-pound California halibut patrols the sand bottom in San Diego's La Jolla preserve. Photo by Richard Herrmann of Poway, California.

If your photo is selected, it will appear on these pages with a photo credit (\$25 will be awarded for selected photographs). To have your photos considered for publication, send your color transparencies to Editor, PACIFIC DIVER Magazine, P.O. Box 6218, Huntington Beach, CA 92615, with a sentence or two describing each shot, where it was taken, and what equipment was used. Photos must be submitted with a self-addressed stamped envelope to ensure their return.

Pictorial



▲ "Solo Flight," the grand prize winner in the professional division of the Channel Islands National Marine Sanctuary's Images '90 photography contest. Taken with a Canon F-1 camera combined with a 300mm 2.8L lens and Kodachrome 64 film. Photo by Bryant Maraist of Santa Barbara, California.



▲ The vibrant colors of soft coral and fish are captured in the warm waters of Taveuni, Fiji. Taken with a Nikonos camera, a 28mm lens, an Ikelite Ai strobe and Fujichrome 100 film. Photo by Phil Hookham of Culver City, California.



▲ Breathtaking colors highlight a brooding anemone found off Stubbs Island, near Vancouver Island, British Columbia. Taken with a Nikonos III, an Oceanic 2000 strobe, a 1:3 macro tube and Fujichrome 100 film. Photo by Dianne Rodgers of Bainbridge, Washington.

This smooth turban snail with feeding barnacles attached to it was found at the Rockpile off La Jolla, California. Taken with a Nikonos V equipped with dual SB-103 strobes and a 1:2 macro lens. Photo by Tracy Clark of El Cajon, California.



PD's Second Dive Boat Day Attracts Clear Skies, Cold Water and Lots of Tabata Dive Gear Winners

Early one Saturday morning last January, 30-something divers boarded the *Golden Doubloon* for a trip across the channel to Catalina Island to enjoy some good diving, good food and the opportunity to go home with some great Tabata prizes. It was the second PACIFIC DIVER Dive Boat Day, and it was a lucky trip, because we hit a fair weather window in the midst of two straight weeks of stormy weather, which enabled us to enjoy sunny skies and 40-foot-plus visibility at Bird Rock, Parson's Landing and Indian Rock (just outside of Emerald Cove).

After the third dive, gear was packed up and Tbone steaks were broken out and thrown on the barby. Then, with everybody kicking back with full stomachs, Danny True of Tabata USA got up and raffled off a sack full of new Tusa dive gear.

John Donaldson won a pair of Tabata fins, Joe Pomento a Tabata mask, Eric Paulsen a Tabata snorkel and Greg Barrett a Tabata gear bag. Everybody on board got Tabata hats and stickers and a free PACIFIC DIVER T-shirt.

Next on PACIFIC DIVER's monthly Dive Boat Day schedule is a trip out to Anacapa and Santa Cruz islands, on March 22, aboard the dive boat *Peace* out of Ventura Harbor. Sponsored by Beuchat



Top: Raffle winners (from right) Eric Paulsen, Greg Barrett, Joe Pomento and John Donaldson (kneeling) pose with Danny True of Tabata USA. Bottom: The PD Dive Boat Day gang.



Golden Doubloon at anchor at Emerald Cove. Photos by Steve Essig.

tors and about a dozen Source diving computers for everyone on board to try out. They'll be looking forward to your feedback about what you like and don't like about this top-of-the-line dive gear. Sherwood prizes will be raffled off and, of course, PD T-shirts will be passed out to everyone. The San Miguel trip is scheduled for April 12.

On May 17 it's back down to 22nd Street Landing when we'll climb aboard the *Encore* for a trip out to either Santa Barbara or San Clemente island (conditions will dictate which way we go). Sherwood will be along for this trip too, with gear to try out and prizes to raffle off.

Each trip is guaranteed to be a great time. Boats have been filling up fast, so if you want to join PACIFIC DIVER, Beuchat and Sherwood for some fun-diving, call (714) 361-9765 and place your space reservation. And we'll see you in the water!

USA, there will be lots of diving, some delicious food and great prize giveaways, compliments of Beuchat USA.

Then it's up to Santa Barbara

with Sherwood Scuba aboard the dive boat *Vision* for an attempt at San Miguel. Sherwood representatives will be bringing along a dozen or so new Maximus regula-

Washington Weather Creates Another Bridge Wreck

A circumstance of errors and heavy rains led to the sinking of yet another bridge along Washington's inland waterways. Following the completion of the new I-90 floating bridge across Lake Washington (the most expensive stretch of road in United States history), independent contractors under the supervision of the Department of Transportation were refurbishing the adjacent 50-year-old bridge to handle escalating traffic between Seattle and the east side.

Workers had cut a series of holes in the bridge deck which caused water to build in the pontoons of the bridge. With the record rainfall over this past Thanksgiving weekend, the pontoons filled above the pumping capacity and the bridge eventually broke apart and sank to the bottom of the lake.

The sinking of the I-90 bridge brings the number of Washington bridge wrecks to an unprecedented three. On November 7, 1940, the newly constructed and poorly designed Tacoma Narrows Bridge (the fifth largest suspension bridge in the world) plummeted into the waters of Southern Puget Sound during a 40-mile-per-hour windstorm.

During the Columbus Day

storm of 1979, the Hood Canal Floating Bridge linking Washington's Kitsap and Olympic peninsulas foundered and sank in 100-mile-per-hour winds, creating Washington's second bridge wreck. Now the I-90 bridge joins the collection. You'd think Washington's Department of Transportation would win the "And They All Came Tumbling Down" prize or something.

Ocean Divers Trains the First Soviet PADI Member

Ocean Divers, a PADI 5-Star IDC in Key Largo, Florida, recently trained Valeri Darkin of the Soviet Union through PADI's Medic First Aid and Dive Master courses. As one of the first private dive operators in the Soviet Union, Darkin was in the U.S. learning American diving techniques and training methods to help develop his live-aboard dive

boat operation, which takes tourist divers to the Sea of Japan from Vladivostok.

Although he has been diving since 1969, Darkin took the PADI courses to gain PADI credentials and the knowledge necessary for servicing American dive tourists. He plans to achieve a PADI open water scuba instructor rating during his next U.S. visit.

Okay, is This Going to be an El Nino Year, or isn't It?

El Nino, that north-flowing current that warms California waters in an infrequent and historically unpredictable fashion, affects both the marine environment and divers in a great many ways. The last big El Nino in 1984 drastically reduced the size of the kelp beds in Southern California and brought warm-water fish and invertebrates to Northern California.

There has been an unofficial competition between groups of scientists to predict the next El Nino, with the computer modeling group predicting one for the 1990-1991 season. There were reports of Pacific mackerel being caught as far north as Anchor Bay in 1990, and the Channel Islands have experienced some of the warmest water in several years. Whether this is an official El Nino year has yet to be determined, but if it is we are likely to be in for another year of drought. *Continued*

Special Rescue Workshop to be Held in Santa Monica on April 13

A special one-day diver rescue workshop, sponsored by the Penta County Underwater Safety Committee, the Los Angeles County Department of Beaches and Harbors, the Los Angeles County Underwater Instructors Association, the National Association of Underwater Instructors and the Catalina Island hyperbaric facility, will be held in Santa Monica, California, on Saturday, April 13, 1991. The event is open to all certified scuba divers.

The workshops, being conducted to raise funds to support the Catalina Island recompression chamber, will begin with presentations by various members of Southern California's sport diving industry. Following lunch, which is included in the workshop fee, rescue demonstrations will be conducted by Baywatch lifeguards and by the U.S. Coast Guard. The demonstrations will involve boats, a helicopter and lifeguard divers. Workshop participants will then have opportunities to practice diving rescue techniques.

A closing reception will be held at the Los Angeles Central Lifeguard Headquarters in Santa Monica. Participants will receive a commemorative T-shirt and a certificate of participation.

Attendance is limited to only 125 divers, and costs \$35 per diver. To register, send a check, payable

to "Diver Rescue Workshop," and a self-addressed stamped envelope to Diver Rescue Workshop, 8121 Manchester Ave., Box 582, Playa

del Rey, CA 90293. For additional information, contact Dennis Graver at (213) 301-3015 or Jennifer King at (213) 548-4183.

No Kidding! Al Hornsby Really Can Sing!

What's this? PADI executive vice-president Al Hornsby has just released a collection of eight original songs on a cassette he calls *Dolphin's Dance*. As it turns out, the cassette is really very good.

It has a sweet tropical taste to it, kind of like Jimmy Buffet without the hangovers. Featuring some soulful acoustic guitar action, included on the cassette are some great songs of the sea that bring to mind placid lagoons, rustling palm trees and balmy sunsets, the kind of music to listen to when you're poured into a wicker chair in the glow of a setting sun. But there are also a couple of almost-hard rock songs and a funky tune — our favorite — called "Isabella," about treasure diving.

Dolphin's Dance is the result of the collective efforts of Al, his wife Melanie (who has a voice to kill for), Al's brother Roger Hornsby and several close friends. It's available for \$9.95 plus \$1.50 ship-



ping and handling (California residents include 67 cents sales tax) from Seachild Productions, 1116 8th St., Suite 44, Manhattan Beach, CA 90266. It's also available at select dive stores.

Growing Marine Mammal Populations Taking Over Human Territories

Just when you thought that pollution, oil spills and gill nets were going to destroy our marine mammals, here's some good news about our Northern California resources. In San Francisco, a marina near Pier 39 has evacuated all boats from one of its floating wharfs. The reason? A group of California sea lions has decided to call the wharf home. They've crawled up onto the wharf to enjoy the sun and, consequently, the wharf is in danger of collapsing

under their weight.

In Monterey a similar problem is occurring as sea lions are beginning to migrate from their traditional hauling out spots onto manmade structures. In both areas the presence of tourists, who feed these animals, is partially responsible for the problem, and authorities are forbidding the feeding of marine mammals while trying to figure out how to disperse the sea lions.

Further south, a large popula-

tion of harbor seals, which has historically occupied Seal Rock off the 17-Mile-Drive in Carmel, has been growing so fast that the animals have been forced to establish a new nursing area on nearby Fanshell Beach. For the past three years authorities have closed part of the 17-Mile Drive to minimize disturbances to the seals. So whose beach is it anyway? One look from one of these chubby creatures and you know not to ask.

Long-Term Undersea Habitat Experiment Planned

The California Oceanographic Society, a scientific study group based in Southern California, is entering Phase One of an undersea habitat experiment.

A long-term undersea habitat will be placed in Southern California waters to study man's effects on the marine environment. The project's scope will include ocean floor core sampling to measure pollutants, grid studies to monitor ocean life, and ocean current, temperature and water quality studies. This project has a minimum proposed life of 15 years.

The society plans to solicit help from local colleges, universities and businesses interested in the study of our oceans. A full project outline is available by contacting the California Oceanographic Society at (213) 514-2426. Please specify "Ocean Probe '91" when inquiring.

3rd Annual Catalina Chamber Day!

It's getting close to time to sign up for the third annual Catalina Chamber Day to support Catalina's hyperbaric chamber. On May 15, 1991, Southern California dive boat operators will donate their vessels to take divers out for a day of diving that includes a tour of the chamber facility, located at the Isthmus on Catalina Island.

The day promises to be a lot of fun, and it's for a good cause, so call up your favorite dive boat and make a diving date for May 15.

New Lahaina Divers Store Opens in Kaanapali, Maui

Lahaina Divers has announced the opening of its second store on the Hawaiian island of Maui. The new store is located in Whalers Village Mall in Kaanapali. In addition to better serving both visiting and resident divers from the Kaanapali area, the new store provides a broader range of diving and water sports equipment than the Lahaina location.

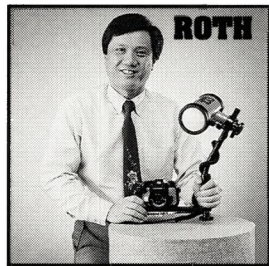
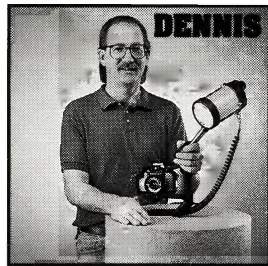
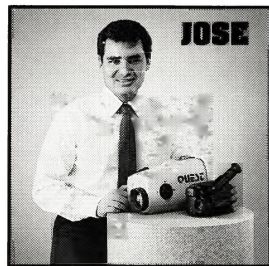
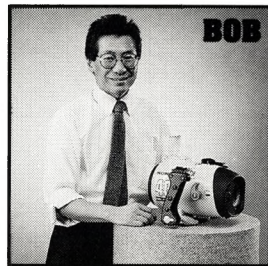
In addition to a six-foot hammerhead shark displayed near the entrance of the store, there is a

special underwater photography and videography section featuring Maui's unique marine inhabitants.

Lahaina Divers' existing store, in the heart of old Lahainatown, will continue to serve as the base of operations for dive charters as well as a full retail, rental and training center.

For more information on Maui's newest dive store, contact Kim Roberts of Lahaina Divers, P.O. Box 1547, Lahaina, HI 96761; (800) 657-7885 or (808) 667-6280.

Continued



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HELIX EXTENSION TUBE SYSTEM

Our unique extension tube system is designed to help you build the most versatile set of tubes and framers available, for land use as well as underwater. With just 3 basic tubes, you can develop up to ten different tube, framer, and lens combinations for your 35mm or 28mm Nikonos UWN lenses without having to buy ten different tubes and framers.

Constructed of sturdy black anodized aluminum, each extension tube easily attaches between your Nikonos and lens. The epoxy-coated stainless steel framer connects to the extension tube with a thick knurled knob. Each tube's inside barrel has been specially turned to reduce internal reflections and improve image contrast.

HUP-122 • Basic extension tube set w/2 tubes and 3 framers 1/35mm UWN (1.1, 1.2, 2.1)	86.00
HUP-230 • Basic set w/2 tubes and 3 framers 1/28mm UWN (1.1, 1.1.8, 1.2.75)	86.00
HUP-123 • Deluxe set w/3 tubes and 4 framers 1/35mm UWN 2.1, 1.1, 1.2, 1.3	120.00
HUP-125 • Super Master set w/3 tubes and 7 framers (2.1, 1.1, 1.2, 1.3/35mm UWN; 1.1, 1.1.8, 1.2.75/28mm UWN)	171.00

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It is now possible to get macro shots with your Nikonos camera and 35mm UWN lens when you are above water. Framers calibrated for surface use with Helix extension tubes are simple and easy to use.

HUP-SFS • Set of 3 framers 1/surface use only, (1.1, 1.2, and 1.3) 1/35mm UWN and Helix extension tubes	59.00
HUP-SF1 • Surface use framer (1.1) 1/35mm UWN & Helix blue tube	25.00
HUP-SF2 • Surface use framer (1.2) 1/35mm UWN & Helix green tube	25.00
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HELIX MARINE FILTERS

HUPXX • Marine filter (specify 46, 49, 52, 55 or 58mm)	44.25
HUP62 • Marine filter, 62mm	56.25
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HUP-FF2 • EO #59 female bulkhead 90 w/PC, 11", 1/housings up to 1/2" thick	85.00
HUP-FF3 • EO #59 female bulkhead 90 w/PC, 11", 1/housings up to 3/4" thick	85.00
HUP-MDOI • EO male connector cover	11.95
HUP-MMF • EO female connector cover	11.95
HUP-E0II • EO "Y" connector (male, male, female)	195.00
HUP-E0II • EO "Y" connector (male, female, female)	195.00

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NEW! SL-15 • Signal flash	27.75
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HUP-E0II • photo dive light w/krypton lamp	19.95
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HELIX/SONY DEMO CCD-M9 VIDEO-8 OUTFIT

These are demonstrator models refurbished by Sony and include the CCD-M8 Sony 8mm Handycam camcorder with 2/3" CCD imaging sensor and flying erase head, Handycam sports shell (an all weather compact shell for surface use only, not an UW housing), the EV-C3 recorder/player with flying erase head and control Louptout, records up to 2 hours on P6-120 video cassette. Also included are a charger, nicad battery and an RF adapter. These refurbished outfits include new equipment warranties from Sony of America, 90 days labor and 1 year parts.

This Sony-8 outfit is only sold complete with a new housing, as listed

below. All prices include the complete Sony Video-8 outfit described above.
EWA underwater flexible housing, w/flat port, rated to 30' 1,049.00*
Ikelite #6030.3 housing w/dome port & WA lens adapter, rated to 150'. Includes start/stop & distance/white balance controls plus double-contour lead hand grips 1,399.00*
Pro-Line aluminum housing w/dome port, WA adpt., rated to 325' 1,699.00*

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LMS • Seablaze video lighting system w/100W, 12V light head, battery pack & charger (100W/30 min., 50W/70min.)	560.00
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MORRIS AQUA F-5TTL

The Aqua F-5TTL is especially designed for underwater usage. It does not require a housing and offers a multitude of state-of-the-art features. Twin reflectors provide wide angle coverage, allowing the use of the flash with 28mm lenses (or 15mm with supplied diffuser). It has a guide number of 32 at ISO 100 (in feet) underwater. The F-5TTL can operate in TTL with the Nikonos V, with full auto exposure control with Nikonos II/IV cameras, and in manual control with full and 1/4 power settings. The 17" stainless steel arm can be raised and lowered to any height. The F-5TTL has battery saving, quick recycling thyristor circuitry. It uses 6AA batteries (not included) so it can be used anywhere. It recycles in .5 to 10 seconds with fresh batteries, and gives 80 to 300 flashes. It also features a special continuous flash setting for signaling. It has o-ring seals for protection to 165'. The flash includes TTL auto slave sensor, dedicated sync cable, camera mounting bracket and arm, wide angle adapter, spare o-rings and grease.

12040 • Aqua F-5TTL	449.00
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MORRIS AQUA F-3TTL

Submersible to 180 feet, this flash automatically controls light output and provides TTL control with Nikonos V. High/low selector permits dual manual exposure output. The flash head swivels and tilts. Five to 10-sec. recycling time with fresh set of 4AA alkaline batteries (not included). UW guide number 22 at ISO 100 in full power. Includes 15mm wide-angle adapter.

12020 • Aqua F3TTL	279.95
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NIKONOS V - Why not settle for the best system?

A system with the widest selection of world class lenses (15, 17, 20, 28, 35, 80mm), add-on wide angle adapters (13, 16, 17mm), add-on close-up lenses (4.75, 8.5, 15"), and extension tubes (2.1, 1.1, 1.2, 1.3 ratios). A system with over a dozen manufacturers designing and building accessories for the Nikonos system.

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Package 2A: Nikonos V camera (w/battery & spare O-rings), 35mm f2.5 UWN, Aqua F-3 TTL (w/arm, tray & sync cord), dive light & equipment case (18x13x8") w/foam	819.00***
Package 3A: Nikonos V camera (w/battery & spare O-rings), 35mm f2.5 UWN, Speedlight SB-103 (w/arm, tray, sync cord, diffuser, case & spare O-rings) & equipment case (18x13x8") w/foam	925.00***†
Package 4A: Nikonos V camera (w/battery & spare O-rings), 35mm f2.5 UWN, Aquafash 28 TTL (w/arm, tray, TTL sync cord, remote sensor w/slave, diffuser (15mm) & spare O-rings) dive light, light mount & equipment case (18x13x8") w/foam	989.00***†
Package 5A: Nikonos V camera (w/battery & spare O-rings), 35mm f2.5 UWN, Sea & Sea YS-50TTL (w/arm, tray & sync cord) & equipment case (18x13x8") w/foam	899.00***†

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This is the camera that's at home in any hostile environment. This self-contained, water tight 35mm camera with 35mm f2.8 lens, built-in flash, motor drive and light meter can go through water, mud, dirt, ice, snow and rain - or anything else Mother Nature has in store for you. Equally at home, underwater or on land, it is the perfect all-weather camera system.

S0101 • Motormarine I camera with grease, batteries, strap & close-up lens	CALL
SS356 • as above S0101 plus Hanimex everready case	269.50
PKGS53 • as above S0101 plus Helix slave strobe, arm & equipment case with die cut foam	359.00
S0110 • Motormarine I camera with Sealoc bulkhead, grease, batteries, strap & close-up lens	CALL
SS359 • Motormarine I camera with bulkhead, close-up lens, YS-50MS strobe arm & tray	CALL
S0102 • Macro lens with framer (1.3) for MMI (UW use only)	74.95
S0104 • SWL-16 wide lens adapter (16mm) /MMI (UW use only)	254.95
S0160 • Shoulder bag	23.50
S0181 • Lens caddy for MMI	29.95
S1150 • YS-50M kit with arm & tray	CALL

SEA & SEA MOTORMARINE II

S0301 • Motormarine II 35mm camera	CALL
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S0301 • Macro lens w/framer /MMII (1.3)	74.95
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S0302 • SWL-20 20mm adapter /MMII	264.00
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S0380 • O-ring replacement /MMII	6.95
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S200 • SWL-16 adapter (16mm) /f35UWN	195.50
S0140 • Optical viewfinder 1/18, 28, 35mm	82.00
S6500 • Tube & framer 1/35 UWN (1.1)	57.50
S6600 • Tube & framer 1/35 UWN (1.2)	57.50
S6700 • Tube & framer 1/35 UWN (1.3)	57.50
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We are proud to announce that Helix is the U.S. distributor for Neville Coleman's UNDERWATER GEOGRAPHIC magazine. This quarterly magazine regularly features articles on archaeology, natural history, photography, exploration and travel, in all parts of the globe. Diving techniques, medicine, survival and equipment tests round out each issue.

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American Institute of Technology is Officially Recognized by PADI

Last January the American Institute of Technology (AIT), based in Phoenix, Arizona, was officially recognized by PADI as a career-oriented college diving program.

The approval AIT's curriculum received for career training by PADI Headquarters came after eight months of program development by AIT president Wade

Murphree, program director Marty Campbell and PADI course director Wanda Larson. Graduates of the eight-week program will be certified as PADI Master Scuba Diver Trainers and Medic First Aid Instructors.

Licensed by the Arizona State Board of Postsecondary Education and accredited by the National Association of Trade and Tech-

nical Schools, AIT also provides professional placement assistance and financial aid for those who qualify.

For more information on AIT's college diving program contact the American Institute of Technology, Scuba Careers Department, 1917 W. Glendale Ave., Suite 3, Phoenix, AZ 85021; (602) 433-1076, FAX (602) 433-0097.

Anniversary Sales and Marine Swap Meet Slated for March 16

Port-A-Marine Inflatable Boats, of Costa Mesa, California, will host its 24th anniversary sales and marine swap meet on Saturday, March 16, from 8 a.m. to 6 p.m. at 2940 College Ave. (near Harbor and Baker).

Port-A-Marine's entire stock of new and used inflatables (including Achilles, Avon, Novurania and Quicksilver models ranging in size from eight to 23 feet), Arima fiberglass boats (15 to 19 feet), outboards, trailers, accessories and parts will be offered at greatly reduced prices, just for the one day.

Swap meet spaces are still available. For more information call Port-A-Marine at (714) 540-2070.

Let Wet Pleasure Put the Fun Back into Your Diving

Are you tired of diving the same old sites? Are you looking to put a little fun back into your diving? If so, Wet Pleasure dive shop has a series of classes designed to perk your underwater interests.

One class will teach you about a dozen shipwrecks along Carmel's 17-Mile-Drive and the Big Sur coast. In the classroom you'll learn how to research wrecks as well as how to recover brass. Then on the weekend you're shown the location of the wrecks and finally you

make a dive on one of them. All wrecks are in shallow water and accessible from shore.

In addition to wreck diving, Wet Pleasure offers classes on how to find jade at Jade Cove in Monterey County and puts on a spearfishing clinic. Another interesting class unveils the locations of little-known dive sites along the 17-Mile-Drive and the Big Sur coast, all of which are accessible from shore and have plenty of game.

All classes cost \$10 and include one classroom session and a day of diving. Wet Pleasure is located at 2245 El Camino Real in Santa Clara. Call (800) 24-SCUBA or (408) 984-5819 for more information and class dates.

We're Talking a Monster Sea Bass Here!

Allan Drexler of Diamond Bar, California, speared this huge 60-pound white sea bass on a recent trip to the Channel Islands. Dr. Drexler, an avid free-diver, is president of the Long Beach Neptunes dive club, the second oldest dive club in the United States. The club, limited to 50 members who are primarily big game spearfishermen, has bagged more world-record fish than any club in the world.



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Marty Snyderman

Monterey's 7th Annual Chocolate Abalone Dive is Fast Approaching

The 7th Annual Chocolate Abalone Dive will be held on Saturday, March 30, at the Breakwater in Monterey. Hundreds of vacuum-packed chocolate abalone will be planted in Monterey Bay, each of which has a prize number in it. Last year 599 divers entered the contest and \$22,000 worth of prizes was given away.

The competition benefits the Pacific Grove decompression chamber and Divers Alert Network (DAN). For an entry form contact the Aquarius Dive Shop at (408) 375-1933, or write to Chocolate Abalone Dive at 2240 Del Monte Ave., Monterey, CA 93940. The entry fee is \$17 for early registration, and \$20 for same-day registration.

British Columbians Say Goodbye to Ab Hunting

The federal Department of Fisheries and Oceans has shut down the entire coast of British Columbia to all harvesting of abalone.

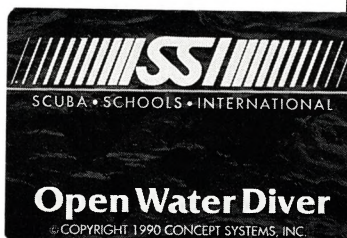
SSI Offers a New License to Dive

These days Scuba Schools International's (SSI) open water divers are carrying a new license to dive. The international certification agency recently released a new design for its open water diver certification card.

The card now features a world map floating on ocean waves with the new SSI logo. Look for all SSI diver certification cards to change in design throughout 1991.

According to department shellfish coordinator Frances Dickson, closure of the lucrative fishery is expected to last for at least five years. "We have a depletion of stocks. We're not getting enough young abalone coming along to sustain the population to the point where we can have a harvest."

The total ban affects 26 commercial harvesters, plus all native Indian and recreational harvesters. To some observers, this action may be what divers in the western United States can look forward to if our abalone situation doesn't take a turn for the better.



Call (303) 482-0883 for the location of the SSI store in your area.

Seattle Aquarium's Underwater Film Festival is on for April 26-27

April 26 and 27 marks the date for Seattle Aquarium's 4th Annual Underwater Film Festival and Underwater Photography Contest. The evening shows at Kane Hall on the University of Washington campus will feature both local amateur and professional underwater photographers. In addition to the evening shows, photography and marine life workshops will be conducted during the day at the Aquarium. The deadline for the under-

water photography contest is March 28 and is limited to slides only. The categories are Open (any photograph by both amateur and professional photographers), Amateur Macro (photographs by amateur photographers taken with up to a 1:5 ratio) and Amateur Normal/Wide Angle (any photograph taken with a larger than 1:5 ratio).

There will be cash prizes for the top three winners in each category. For more information contact the Seattle Aquarium at (206) 386-4300.

British Columbia Dive Show Scheduled for March 29-31

The second annual Scubafest consumer dive show will be held Easter weekend, March 29-31, at the Coast Bastion Inn in Nanaimo, B.C. on Vancouver Island. Divers from the U.S. and Canada will participate in a variety of diving activities, seminars, slide shows and a dance and trivia night on Saturday. On Sunday, an underwater Easter egg hunt for prizes will wrap up the weekend.

For more information call Dwayne Schulz at (604) 758-9024.

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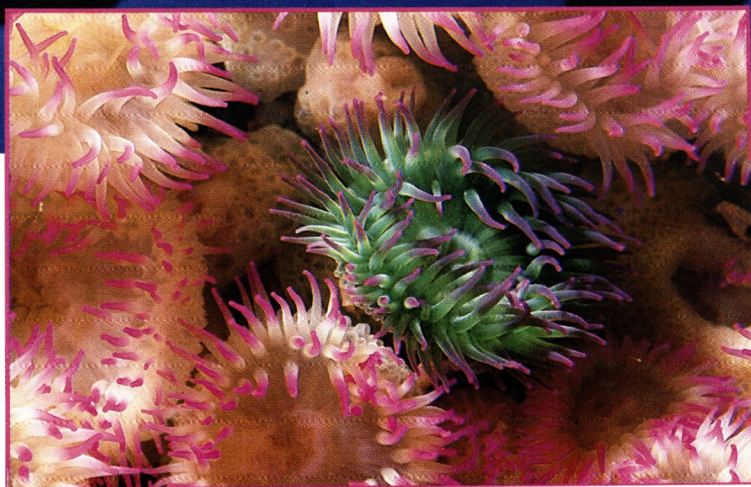
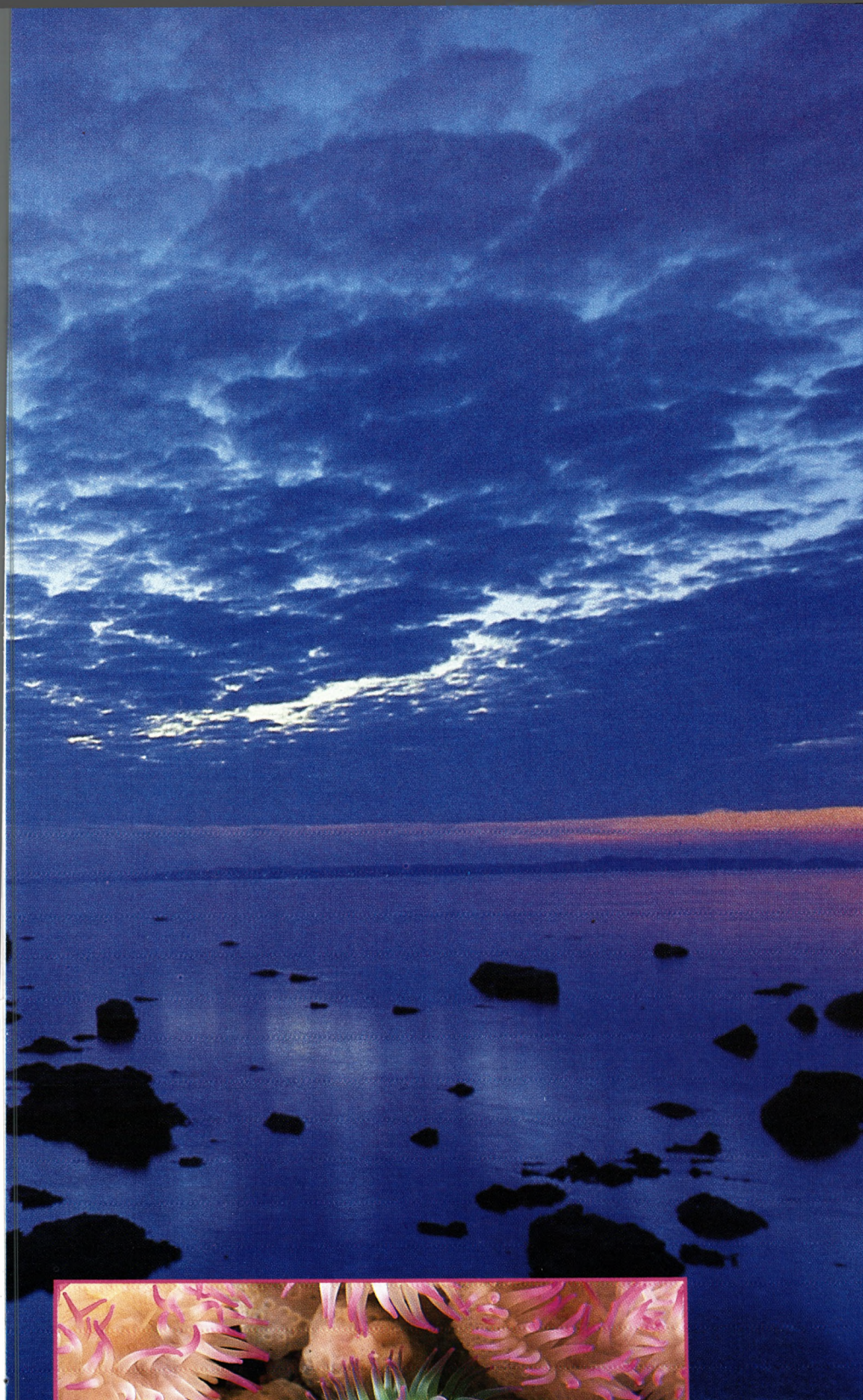


CARL WEBER

Made up of 25 large islands and hundreds of smaller islets and rocks, Canada's Gulf Islands offer plenty of prime diving as well as a respite from the rat race.

Article and photos by Ed Weber

I was wedged into some rocks against the building tide and had the shot lined up perfectly in my viewfinder when I felt the tug on my fin. "What now?" I wondered with frustration. One of my pet peeves while shooting underwater photographs is to have my dive buddy interrupt a shot to show me something he thinks is interesting — usually a starfish crawling across a rock; this when I'm focusing on hatching



Above: Sunset in the Gulf Islands. Left: brilliant aggregating anemones adorn the shallow substrate at Dodd Narrows.

octopus eggs or some other "once-in-a-lifetime" shot.

This time I was focused on a beautiful purple-tipped aggregating anemone folding out its acrorhagi in a defense posture. The tug came again. "Oh well, maybe he's running out of air," I thought as I turned around.

I just about swallowed my regulator! About six inches from my face was a huge sea lion with two pals waiting like impatient labradors for me to engage in a game of tag. The sea lions swam around me, performing an aquatic ballet, but when they finally realized I wasn't as enthusiastic about their game as they were, they turned and swam off into the emerald gloom.

By this time the current was beginning to pick up and I had lost my position in the rocks as well as my shot. I had only a few frames left anyway, so I decided to head for the surface to find my buddy and get picked up by the skiff.

We had been diving a narrow current-ravaged channel called Dodd's Narrows in the northern Canadian Gulf Islands. This archipelago, which hugs the southeastern flank of Vancouver Island, is formed by some 25 major islands and hundreds of smaller islets and rocks. The entire Gulf Island archipelago is squeezed into a 600-square-mile area.

These pine-covered islands are made up primarily of sedimentary rock and are within easy access of the bustling city of Nanaimo on the eastern shore of Vancouver Island. Several day boats and live-aboard charter operations based out of Nanaimo offer two- and three-day diving excursions to explore the colorful reefs of the Gulf Islands.

We were out here on a weekend charter. Shortly after leaving Nanaimo we had dropped anchor near Mudge Island just outside **Dodd's Narrows** for our first dive. Two daily tidal exchanges squeeze through the narrows, creating some ferocious currents which bring an abundance of microscopic plankton into the pass, which in turn supports a prolific community of filter-feeders. One of the unique features of Dodd's Narrows is a wide emerald band of aggregating anemones that blankets the rocks from the surface to about 20 feet. These asexual, genetically identical anemones clone themselves to form colonies along the rocky substrate. The anemones are fiercely competitive and fight their genetically different neighbors by inflating stinging cells to protect their boundaries. This behavior creates narrow ribbons of bare rock between the communities.

A little deeper, the wall breaks up into a

series of boulders and sandstone slabs shrouded in velvety red encrusting sponge. The wall eventually levels out to a shale bottom in around 65 feet.

After that first dike, we pulled anchor and headed south through False Narrows, bound for **Gabriola Pass**. Gabriola Pass is a narrow channel on the outer boundary of the Gulf Islands separating Gabriola from Valdez Island. It is one of the major passages in the Gulf Islands connecting the sheltered inner islands to the Strait of Georgia. As a result, boat traffic is sometimes heavy, but the diving is worth the inconvenience.



We pulled into sheltered Wakes Cove just outside of the pass and geared up for a short skiff ride to the wall that stretches along the north side of the pass. In the shallows bull kelp grows thick among rocks replete with purple ochre and blood stars. From there the wall stair-steps downward in a series of grottos and huge encrusted boulders to a shale bottom in over 100 feet of water.

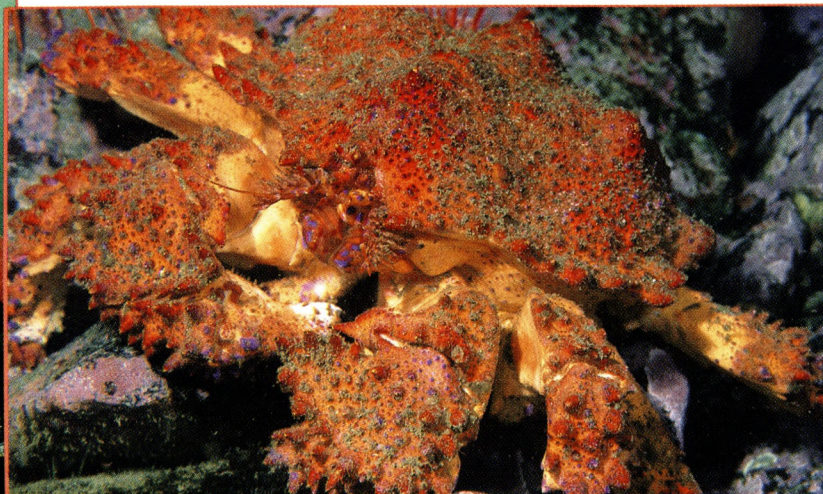
We dropped into the pass on the tail end of a slack tide, and followed a rocky corridor through the kelp as if it were a path through a mountain forest. The corridor opened up onto a meadow blanketed with white plumose anemones that cascaded into the depths.

The current began to stir. We drifted along on a sluggish ebb that was just

strong enough to carry us without much kicking. We descended over a boulder where I found a lethargic red Irish lord changing his skin color to blend with the backdrop. It appeared willing to pose for a portrait, so I swung my camera into position.

Having checked the distance, I set my strobe angle and was inspecting the shot through my viewfinder when came the familiar tug at my fin. Sighing, I turned around to find my buddy frantically pointing into a large fissure in the rock. This time I was not disappointed by the interruption. An enormous purple-tipped Puget Sound king crab sat there just daring us to come closer.

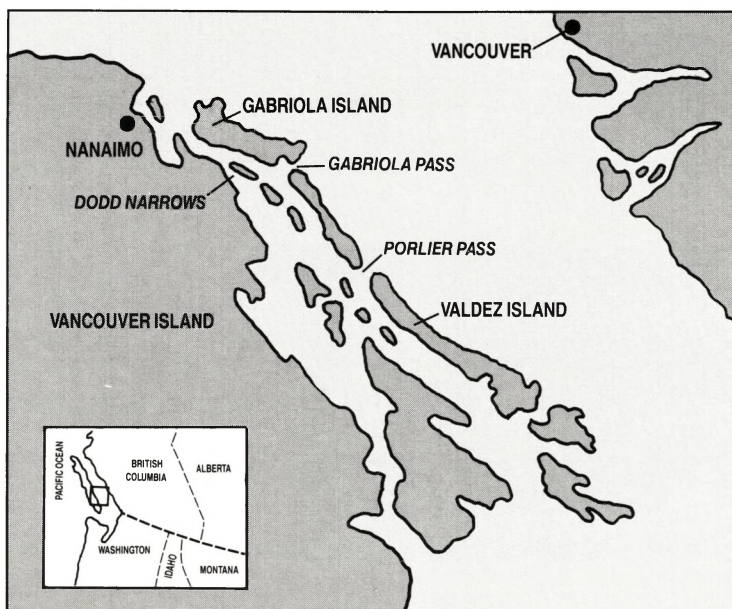
These huge crustaceans start life off as small fiery orange crabs with a horny



Left: Gabriola Pass, with its walls and shale bottom, is one of the major passages in the Gulf Islands. Above: This monster Puget Sound king crab was a good 10 inches across and impatient with photographers.

A brilliant brooding anemone found in Portlier Pass. In addition to excellent reef diving, Portlier Pass is home to a number of diveable wrecks.





prominence resembling a rhinoceros horn. As they grow older and larger, their color fades into a brown and pale orange with bright purple tips. Puget Sound king crab carapaces can reach widths of over 10 inches. The insides of their claws are lined with pearl white teeth that resemble human molars.

This guy was a good eight to 10 inches across. I was able to fire off a few shots before it grew tired of the commotion and backed deeper into the crevice.

Pushing off, we let the current carry us further down the wall. A vibrant assortment of marine life exists along these carved ledges. Cup corals, encrusting sponges, small sculpins and assorted anemones can be found crowding the rocky shelves. After firing a few more frames, I checked my gauge and we started our ascent back up the wall.

The next morning we cruised south along the inside of Valdez Island, bound for **Porlier Pass** between Valdez and Galiano Island. The rocky shores of Porlier Pass make up one of the most exciting areas to dive in the Gulf Islands. In addition to reef diving, there is also excellent wreck diving. One of the most renowned shipwrecks in Porlier Pass is the 190-foot side-wheel passenger ship *Del Norte* which sank after striking a reef in the fog in 1868. Today, the hulk of the *Del Norte* can be seen in 85 feet of water. All that remains of the ship is a large pile of coal, her boiler, some engine parts and the upright spokes of one of her side wheels.

The 105-foot tug *Point Grey* is another shipwreck in Porlier Pass. On February 26, 1949, she slammed into Virago Rock during heavy fog while towing a barge of rail cars bound for Victoria. Attempts to

refloat the tug failed and she was eventually abandoned. She remained partly visible until 1963 when a strong gale rolled her off the rock into deeper water. Now laying upside down on a 40-foot-deep ledge, her superstructure remains fairly intact, allowing divers to explore her hull and huge propeller.

Most of the shipwrecks along the British Columbia coastline have been designated as National Historic Sites by the British Columbian government. Removal of any objects on or around the wreck sites is prohibited.

After a short wait for slack tide, we loaded our gear and headed out to dive a rocky pinnacle called **Boscowitz Rock** on the south side of Porlier Pass. The wall on the west side of the pass drops off to more than 100 feet in a series of cascading rock ledges. The wall is sheathed in purple encrusting hydrocorals, forming a colorful backdrop behind bright dahlia and teal anemones. The top of the rock is a labyrinth of anemone-rimmed ravines. Basket stars, soft corals and hydroids all vie for space between the anemones along the rocky corridors.

As the weekend drew to a close we reluctantly packed our gear and headed back to Nanaimo to catch the ferry to the mainland and home. There are few better ways for a diver to spend a weekend in the Pacific Northwest than amid the incredible diversity of marine life and the beautiful colors of the Canadian Gulf Islands. I know I'll be returning soon. □

Ed Weber is PACIFIC DIVER's Pacific Northwest regional editor. He resides in Seattle, Washington.

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A Shark Dive at Colombia's Malpelo Islands

By Judy Wade, Van Nuys, California

Our crew of eight was into the second week of our delivery schedule of *Lammer Law*, a 97-foot live-aboard trimaran repositioning from the British Virgin Islands to the Galapagos to do dive and environmental charters. We'd just passed through the Panama Canal.

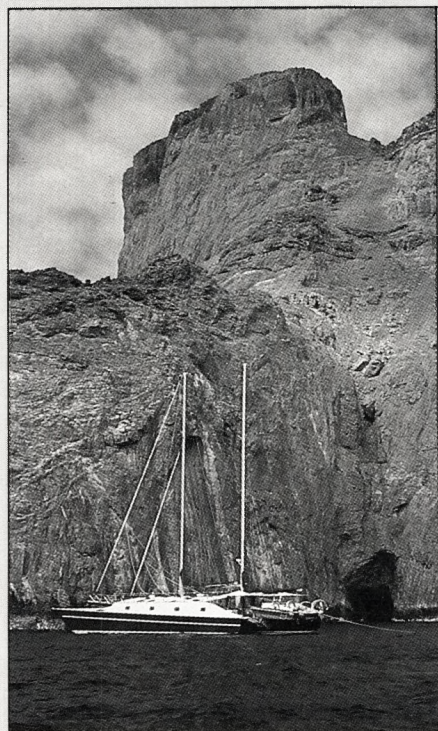
Since we were several days ahead of schedule, Captain Duncan Muirhead decided we had time to explore dive possibilities on a tiny dot he'd discovered on the charts about 250 miles of Colombia's Pacific coast. Our one Spanish-speaking crew member told us that the dot's name, *Malpelo*, meant "Bad Hair."

Malpelo showed up on our radar about one the next morning. By eight we were less than a mile away. We realized the name "Bad Hair" was kind. An overcast sky amplified the barrenness of a monstrous, lifeless hunk of lava jutting out of the water. Small scrub plants clung to crevices in the rocks. Boobies and gulls, the only signs of life, loudly protested our presence. Some of us saw it as creepy. Its stark face appealed to the sense of discovery in others.

Ali, who'd been manning the radio, came above to say she'd made contact with a Colombian frigate which we'd seen anchored at the island's north end. The ship was hiding in the island's radar shadow, presumably to catch drug runners. When asked about diving, the friendly Colombians cautioned us that no one dives here because of the hammerhead sharks.

Apparently, no one anchors here either. Sheer sides, a complete lack of beaches or bays and 130-foot depths just 100 feet from shore meant we had to secure *Lammer Law* to sharp rock outcroppings fore and aft. The Colombians' warning about sharks went unheeded as we suited up for our dive. Since we had no knowledge of the underwater terrain or currents, Buford was elected to follow our bubbles in the inflatable. We decided to limit our dive to 115 feet deep.

As soon as we rolled into the water, five six-foot hammerheads did a disinterested cruise-by about five feet below us. Visibility was a good 60 feet. As we descended, clouds of king angels and bullethead parrotfish, groupers and snappers eddied



Lammer Law precariously at anchor off Malpelo, the home of hammerheads and other marine life unaccustomed to human visitors.

around us. All we had to do was establish neutral buoyancy to feel like we were at a parade.

There's a certain unconcerned look and manner about fish that are used to divers. There's a completely different look about truly curious fish who've never seen divers before. These fish had that look. We counted more than a dozen moray eels which didn't bother to hide in holes.

Being accustomed to the abundance of lush corals in the Caribbean, we were struck by the small, tentative coral outcroppings which clung to the rocks in these 60-degree waters. Sea fans and a few small sponges provided the only decorative touches.

About halfway around the pinnacle, in 90 feet of water, Les pointed up and signaled "30." Above us, eight- and 10-foot hammerheads were so plentiful we couldn't see the surface. Later we agreed that a conservative count was 35 animals.

All during the dive we had to be wary of long-spined sea urchins clustered on the rocky walls. The largest blennies we'd ever seen, easily five inches long, perched unafraid among the rocks. A hand-sized octopus stopped to play, jetting off in a cloud of ink when he tired of divers' games.

As we approached 20 feet for our safety stop we found we had to hand-over-hand our way along the rocks to make any progress. There was no way we could swim against the three-knot current. At 15 feet the search for handholds was made more difficult by a carpet of mussels. The surge became stronger. We had to hold on tight or get swept away. As we surfaced we swam away from the rocks to give Buford room to maneuver the inflatable to pick us up. An unexpected bonus were the four huge lobsters we'd bagged, which easily fed the eight of us for dinner.

Back on the boat, we marveled that we'd not seen a single sign that man had ever been there — not a beer can, bleach bottle or even broken coral was in evidence anywhere. "Bad Hair," despite the inhospitable rocks and gloomy overcast, provided an other-worldly look at what the sea and its creatures may have looked like in centuries past. As we swapped stories we agreed that this was probably the best virgin diving we had ever seen. □

Do you have something in your logbook that you'd like to share with other divers? If so, send it to LOGBOOK, c/o PACIFIC DIVER, P.O. Box 6218, Huntington Beach, CA 92615. A self-addressed, stamped envelope must be included to ensure the return of any photographs. A \$25 award will be given to any stories selected for publication.

Women at Depth



You've come a long way ladies.

and sport diving has improved because of it.

Article by Stacey & Darren Douglass

Most diving instructors ask students on the first night of class why they want to learn to dive. It used to be common to hear female participants replying, "I'm here because my husband/boyfriend wants me to learn to dive." Today, however, it's not unusual

PACIFIC DIVER MARCH/APRIL 1991 27



Dr. Sylvia Earle World Record Holder

A dive to 3,000 feet anyone? Marine research scientist and deep sea adventurer Dr. Sylvia Earle holds the world's record for the deepest solo dive in a one-atmosphere JIM suit. Dubbed by her peers as "Her Royal Deepness," Dr. Earle has recently been appointed by President Bush to the post of chief scientist for the National Oceanographic Atmospheric Administration (NOAA).

Dr. Earle has logged more than 5,000 hours underwater using conventional scuba gear, saturation diving equipment and submersibles. In 1970 she led the first team of women aquanauts at the Tektite research project in the U.S. Virgin Islands. Dr. Earle holds a Ph.D. from Duke University and has served as a Fellow at the California Academy of Sciences. When the *Exxon Valdez* ran aground and polluted Alaska's Prince William Sound, Dr. Earle was one of the first scientists on site to evaluate the damage.

to hear guys saying that they're in class "because my wife/girlfriend wants me to learn to dive." Times change.

In a physical sense, an experienced female diver is a graceful figure to behold. Poised, focused, in total control, subtly interacting with the environment....

Now hold on a minute! No doubt some of you women out there may be thinking "Hey, I've been diving for a couple of years. But when I'm underwater, I certainly don't feel like poetry in motion. And most of the time my gear's controlling me, not the other way around."

LEARNING TO LOVE YOUR EQUIPMENT

According to marine naturalist and diving instructor Dee Scarr, one of the most

significant drawbacks for women divers is having to deal with equipment that doesn't fit properly. Consider some of the following suggestions for selecting your equipment; hopefully they will help you on your way to achieving "poetry in motion." After all, who's in charge down there? You, or your equipment?

Wetsuits

Not that long ago a woman's wetsuit was no more than a man's wetsuit with a bit more neoprene in the hips and bust. Today, you'd think women's wetsuits were designed by Nina Ricci, and considering how much you can pay for one these days, perhaps they are.

sending you into respiratory arrest) try another size, or even another brand. Manufacturers like Sea Quest, Harveys, Henderson, Oceanic and Body Glove build some excellent off-the-rack women's wetsuits.

But if you can't find what you're looking for off the stock suit rack, don't compromise; invest in a custom wetsuit like, for example, a Kettenhofen. The corresponding warmth you'll gain from a good-fitting wetsuit is well worth the effort and expense.

Buoyancy Compensators

A BC designed specifically for women? U.S. Divers has one in its Elan series, as



When it comes to maximizing your comfort underwater, and therefore increasing your diving enjoyment, your wetsuit is perhaps the most important piece of equipment you own. So make sure that your suit's a good one, and make sure it fits.

Fit is perhaps the most critical element in a wetsuit. If it doesn't fit snug (without

does Dacor with its Elite model. The major difference between male and female BCs is that on women's models the shoulder straps criss-cross down the sternum, alleviating constriction for larger-busted females.

However, if you don't mind standard BC designs, look for models that feature padded straps and a snug fit. Some manu-

facturers like Tabata offer extra-small BCs for petite women who have a tendency to swim around inside standard small sizes.

When shopping for a BC, put on your wetsuit jacket and then try on the BC fitted with a tank in the band (be sure the tank is similar in size to what you normally use). Move your shoulders from right to left to ensure your tank does not shift around on your back. A too-large BC with a tank that slips and slides along the back is a common problem for women divers. Eliminate this, and you'll find yourself diving more often, and enjoying it more.

Weightbelts

Have you ever climbed out of the water

systems is that some women consider them bulky. For example, a shorter-waisted diver wearing a Velcro cummer-

There are more female dive masters, assistant instructors and instructors now than at any other time in diving's history.



STEVE ESSIG

feeling like your weightbelt was designed more as a torture device than a system for helping you achieve negative buoyancy?

To ease this waistline pain, try a soft weightbelt. Soft belts are filled either with lead shot or padded with neoprene, allowing two- to five-pound weights to be slipped inside.

The only disadvantage to soft weight

bund-style BC may have difficulty positioning the soft belt's buckle so that it clears the BC straps. So before you consider a soft belt system, try it on (with lead in it) and your BC (with a tank in the harness).

Air Cylinders

Does a five-foot, 100-pound woman need to use the same standard aluminum



MIKE SEVERNS

Kathy deWet Underwater Photographer

An experienced California scuba instructor who has traveled extensively and won numerous underwater photographic awards, Kathy deWet wrote her master's thesis on diver training. An associate professor of scuba diving at the California Polytechnic University in Pomona, Kathy feels that women diving instructors today still face stereotyping, but such negative attitudes can be overcome by having a firm grasp on your profession.

As a veteran instructor, Kathy points out that a female diver who wants to become an instructor must have a solid foundation of skills in order to put brains to work over brawn. "The ocean doesn't care if you are male or female," she says. "Experience is the teacher. Your diving skills must become a part of you, and your ability to read ocean conditions second nature."

80 tank that her six-foot, 200-pound male counterpart dives with? Of course not. Women have smaller lungs, and they generally have better air consumption rates than men, which combine to make large tanks unnecessary.

There are a variety of smaller tanks available to match a woman's smaller size, from 67-cubic-foot cylinders to Sherwood's high pressure Compact 80s for those who want to increase their bottom times.

Additional Insulation

As a woman diver, have you ever noticed a tendency to get colder easier than your male buddy on local dive boat trips? Well, don't worry; you're not a wimp. Comparatively, women have a greater surface-to-mass ratio than men. This increases heat radiation (the rate at which the body loses radiant energy or heat), which is why many women get colder than their male counterparts.

To fight the cold, consider "layering" your exposure protection by wearing your wetsuit over a one-piece neoprene bathing



Dee Scarr Marine Conservationist

Veteran Bonaire dive guide Dee Scarr is most noted for her contributions to marine conservation. Her books *Touch the Sea* and *The Gentle Sea* and her environmental awareness programs have done much to promote an awareness of the fragility of the underwater environment.

It was as a dive guide that Dee first became aware of people's fears to take off their gloves when in warm water environments. "It was a fear stemming from the unknown," she says. "Divers just didn't know what to touch."

Dee often finds her female divers interacting with the ocean environment in a non-aggressive manner. "Women tend to be gentle...their openness in allowing the other person, or in this case the marine creature, to have some control tends to increase the enjoyment of the interaction with the animal."

As an instructor Dee has found that old, improperly fitted dive gear and overpowering buddy relationships can have a crippling effect on new female divers. But, according to Dee, such difficulties can be overcome by knowing your gear and by perceptive instructors rotating buddy teams. Her message to these divers is, "If you are interested in the animals, the plants and what's going on down there, then these difficulties can be overcome."

suit. Body Glove, O'Neil and other manufacturers produce neoprene swim suits that are attractive and provide an extra thermal barrier. A thin 2mm wetsuit or insulated lycra skin suit like SSA's Mark 6 also provides additional thermal protection that can be worn under your standard wetsuit.

You can also stay warmer between dives by staying out of the wind while wearing a damp wetsuit (wet neoprene tends to suck

the heat out of your body rather than retain heat when exposed to chilly winds). Slipping a hooded, lined stadium-type jacket like those made by Warm Wind and TruWest over your wetsuit between dives can do wonders in retaining body heat.

Straps and Such

Longer-haired divers not wearing hoods often yelp in pain when stretching silicone mask straps over their heads, which is nothing compared to the pain that comes when they try to remove the darn things. An excellent alternative to traditional mask straps for long-haired divers are neoprene mask straps, like those made by SCUDA and Slap Strap. These straps can be attached to any mask and are practical when wearing a hood as well.

Regulator mouthpieces can also be a source of discomfort for women. The standard mouthpiece that comes with most new regulators is designed to accommodate men. Smaller pliable mouthpieces are available from companies like SCUDA. If your mouthpiece feels like it's overwhelming your mouth, get a smaller one. They're easy to install and inexpensive.

Finally, all divers find themselves faced with the prospect of having to haul tanks, weightbelts, gear bags and cameras down slippery docks and along sandy beaches. This is an inevitable chore, so accomplish it by using brains instead of sheer brawn.

Backpack-style gear bags are helpful in distributing heavy loads while maintaining a free hand for gripping railings or carrying other items.

Many boat landings provide handcarts for transporting gear from car trunk to boat. But if they aren't available and long hauls are necessary, consider bringing your own equipment cart. Compact, lightweight, collapsible dollies made of chrome steel are much sturdier than traditional

"airport-style" luggage carts, and are available at most photographic/film supply houses. They're expensive, but well worth it.

HEALTHY WOMEN ARE HAPPY DIVERS

A strong case can be made for stressing physical conditioning among women divers. Current medical information indicates that many women possess a lower aerobic capacity than men, and are more apt to tire under identical conditions. If you're not involved in some sort of aerobic conditioning, it's time to hit the gym or get some good workout video cassettes. Running, swimming, aerobics, weight training and proper nutrition can help avoid or reduce in-water stress, muscle cramps and exhaustion while increasing stamina, strength, circulation and lung capacity, and in turn your self-confidence in the water.

As a rule, medication use should be avoided when diving. While some are acceptable, others fall into that gray area that takes into account a woman's physiological predisposition. For example, some women are predisposed to seasickness. While a few of the medicinal preventatives have no side effects, others can cause extreme drowsiness — definitely not recommended for diving.

Women using hormone supplements, antibiotics and other prescription medications should consult a physician familiar with the effects of these medications at depth (a diving physician is best). And although there is no known correlation between medications such as birth control pills and diving accidents, women should be aware of possible mood swings that are caused by hormone-adjusting medications and take that into consideration when planning dive trips.

These days it's not uncommon to find women skippers at the wheels of dive boats throughout vacation dive destinations.



STEVE ESSIG

Hey Guys! Listen Up!

Women and men enjoy diving together, but often attitudes and the traditional roles men have a tendency to assume can put pressure on a diving partnership and eventually ruin the experience. But all is not lost, if men could only keep in mind a few key concepts. For example:

- Women are individuals, and as such they act and react differently to different situations. Pre-dive planning and discussions between male and female dive buddies is crucial to ensuring a harmonious dive.

- Don't assume that your female counterpart will automatically appreciate you carrying her equipment down to the dive boat for her. Some women may consider this condescending behavior; others just want to take responsibility for their own gear.

- Avoid creating buddy-dependent diving relationships. Divide the decision-making processes, and never push your female dive buddy into a dive that she might not be ready for (or vice versa, for that matter). Both divers in a team should be adequately trained and skilled for a particular dive. This applies to dives in heavy kelp, current and long surface swims.

- Be aware of your diving style. A six-foot, two-inch male does not have the same fin stroke as a five-foot, two-inch woman. No one enjoys frantically chasing their dive buddy while the beauty of the underwater world whizzes by in a flurry of fins.

- Understand the mutual objectives of the dive before hitting the water. In some cases male divers may find their female buddies more cautious in their dive profiles, carefully considering the conditions under which they will be diving. Men — take a lesson from these divers. According to recent reports, women tend to suffer a significantly lower percentage of diving accidents than men.

Even if a diving physician concludes that using a particular medication while diving poses no problems, any drug that has the propensity to alter your decision-making abilities should be avoided when diving. The key here is to know your body, and to listen to it when it speaks to you. If it says "Sit the next dive out," then do just that.

If you even remotely suspect that you are

pregnant, don't go diving; go snorkeling instead. As recently as 10 years ago, it wasn't at all uncommon for pregnant women to dive. Even today a non-diving obstetrician's advice to mothers-to-be is that it is fine to continue any type of physical activity you were involved in prior to becoming pregnant. However, any physical activity that involves breathing compressed air at depth, and the ensuing increase in the partial pressures of oxygen and nitrogen on the body, is clearly a different matter.

The effects of inert bubble formations on a developing fetus are not well known. But it is widely speculated among the hyperbaric medical community that an untimely case of decompression sickness could severely damage the nerve and skeletal tissues of a developing fetus, especially during the first trimester of pregnancy. Dr. O.L. Puttler of Verdugo Hills Hospital in Glendale, California, put it best: "You have the rest of your life to dive, but only nine months to build a baby."

SCUBA DIVING'S FUTURE HAS ARRIVED

Today more women are donning scuba gear and taking the plunge. What's more, women are rapidly stepping into traditional diving leadership roles that were for years considered male territory. There are more female dive masters, assistant instructors and instructors now than at any other time in diving's history. More women are managing, owning and operating dive stores. There are also more women now functioning as scientific diving officers, aquatic conservationists, marine biologists, models, photographers and even commercial divers.

According to admissions consultant Tamara Mendoza at the College of Oceaneering in Wilmington, California, 20 percent of her current students are women. Jerry Clouser, director of the Marine Diving Technician program at Santa Barbara City College, also cites a small yet significant increase in women graduates in his program.

Veteran marine scientist, diver and adventurer Dr. Sylvia Earle put it best during a recent interview when she said, "Women can be encouraged by not discouraging them. Simply allowing women to have equal access to the opportunities that exist will make a difference."

And such a difference women have made in the once macho world of scuba diving. And this is only the beginning. □

Stacey and Darren Douglass are *PACIFIC DIVER's* feature editors.

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- PLANNED AT
- SAFE STOP

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FIND OUT HOW
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In Search of the 'Stone of Heaven'

Just south of Monterey, California, you can find a special kind of treasure at a rugged little dive site called Jade Cove.



Jade Cove on a calm day.

Article and photos by Bruce Watkins

A voluminous plume of rock and silt billowed from an undercut in the rocky bottom. At the mouth of the hole a diver dug frantically, his legs flailing in the surge as he pummeled the crevice with his rock hammer. Finally he stopped pounding, and reached in and pulled his prize from the hole, a 15-pound rock that seemed to glow an unearthly green against the dull red background of the bottom.

Later on the beach the diver let me inspect his find. It was a large sea-polished piece of jade. As I ran my fingers along the smooth surface of the stone my new friend talked about jade and how he was drawn to this stretch of coastline in his search for it. I nodded at his words, my hand caressing the rock. It was as if I was being drawn into the depths of its cool green interior. Suddenly my knees got all rubbery; all I could think of was grabbing another tank and going off to find some jade of my own. I had caught Jade Fever!

THE LINK BETWEEN HEAVEN AND EARTH

Known as the "Stone of Heaven," all you have to do is touch a piece of jade to know that it is no ordinary rock. In fact, jade played a dominant role in the development of both Oriental and South American Indian cultures. In Chinese religions jade has always been the link between heaven and earth. A Chinese emperor once offered 15 cities for a single piece of jade that he could hold in one hand! It is said that the Aztec king Montezuma smiled when he learned that the Spanish conquistador Cortes was seeking only gold, because he knew full well that jade was much more precious.

During the California "Jade Rush" of the 1870s Chinese miners actually left gold lying on the ground in their feverish quest for jade. Today, Confucians carry jade around with them to purify their minds and awaken inspiration, and Buddhist mystics use it to reach the state of samadhi.

Jade is actually two minerals: nephrite and jadeite. Nephrite is the jade of ancient China. It has a soapy appearance. It is also more difficult to fracture, although it is not as hard as jadeite.

Jadeite, on the other hand, has a more brilliant appearance and therefore commands a higher price. Pure jade is actually



The turn-out and trail at Jade Cove is marked by a large sign.

white, but it may be found in a variety of colors, it may be translucent or even transparent, depending upon the nature of its impurities.

DIVING CALIFORNIA'S "TREASURE COVE"

Located off Highway 1 just south of Big Sur is a little-known "treasure" of a dive spot called Jade Cove. Here lies a rich vein of nephrite jade.

The nephrite of Jade Cove comes in a variety of shades of green, from light-colored and almost transparent to a rich dark green. It is easily distinguishable from other green-colored rocks by the way it appears to glow, particularly when viewed underwater.

A lot of jade has been removed from Jade Cove over the years. The largest piece taken to date was a 9,000-pound boulder. The story of how this enormous chunk of jade was brought to shore by a group of divers is told by Don Wobber in his book *Jade Beneath the Sea*. It's a fascinating tale that also covers the subsequent legal battle the divers had with the state of California to keep it. The huge stone now rests in an Oakland, California, museum, and up until 1978 — when it was upstaged by a 143-ton piece of jade from China — the Jade Cove boulder was listed in the Guinness Book of World Records as the world's largest gemstone.

During the late 1800s miners blasted away much of the cliff face of Jade Cove and used large machinery to dig out the treasure. Today, however, Jade Cove is part of the Los Padres National Forest, so the removal of jade is strictly controlled. In fact, jade can only be removed below the high tide mark and no machinery can be

used to haul it up from the beach. (It's almost as if these stringent regulations were created as a gift to the local scuba diving population.)

A RUGGED TRAIL LEADS TO GREAT DIVING

To reach Jade Cove a trail leads from Highway 1, crosses a meadow and then heads down a 100-foot bluff to a beach consisting of large boulders and coarse gravel. Fifty yards offshore and to the left of the beach is Cave Rock. At the base of the rock (on the inshore side) in about 20 feet of water there's a cave that runs parallel to shore straight through the rock. The inside face of the rock is beautiful polished jade. South of Cave Rock there's a large gravel area where small pieces of jade can easily be found.

Jade Cove's bottom terrain consists of large rocks and boulders interspersed with gravel patches. Most of the rocks are covered with red coralline algae (*Amphiroa*) and palm kelp (*Pterygophora californica*). Actually, the cove is thick with kelp, particularly during the summer months. In addition to palm kelp, giant (*Macrocystis pyrifera*), bull (*Nereocystis leutkeana*) and featherboa kelp species (*Egregia leavigata*) can also be found in abundance.

The nooks and crannies on the bottom provide a habitat for an assortment of fish and invertebrates. Large lingcod (*Ophiodon elongatus*) and cabezon (*Scorpaenichthys marmoratus*) sit patiently waiting for small fish or crabs to venture by. Colorful snub-nose sculpins (*Orthonopias triacis*) and painted greenlings (*Oxylebius pictus*) hide among the coralline algae while schools of blue rockfish (*Sebastes mystinus*) and senioritas (*Oxyjulis californica*) dart

through the kelp canopy. Numerous nudibranchs, including bright orange sea cucumbers (*Psolus chitonoides*) as well as giant green anemones (*Anthopleura xanthogrammica*) are also common but often go unnoticed by divers focused on their hunt for jade.

WHAT TO LOOK FOR, WHERE TO FIND IT

Underwater, jade is fairly easy to distinguish by its almost luminescent green color. Once you've seen a piece of jade and a piece of serpentine — a green stone found near jade — sitting side-by-side it will be difficult to ever confuse the two again, particularly after evaluating their hardness with a scratch test. (Jade Cove's nephrite jade is extremely hard. A piece of steel will not scratch the jade but

will scratch the softer serpentine. That doesn't mean that a strong blow with a hammer won't shatter jade, but rather that a firm scratching motion will leave the jade unmarred.)

Carry an abalone iron or rock hammer both for digging out pieces of jade from between rocks and as a tool to perform underwater scratch tests. A goodie bag is also needed to carry the larger pieces to the surface, although it's often easier to stash smaller pebbles inside the sleeves and down the neck of your wetsuit.

You can almost always find small jade pebbles in the gravel beds within the boundaries of the cove, particularly the one near Cave Rock and the one near the northern point of the cove. To find jade pebbles in the gravel patches, you can

either gently fan the gravel while looking for that characteristic jade color, or dig out a gravel bed with a small shovel.

Larger pieces of jade can be found just about anywhere. Search under large rocks and overhangs, and scrape the algae off of promising specimens. If it's a particularly calm day search in the shallow areas that are not diveable when the surf is running. Diving in the calm following a large storm can be the most rewarding time to find jade since the rough water usually exposes many previously hidden pieces.

A few words of warning about diving at



Top: Stephanie Tyler with specimens brought up from Jade Cove. Right: A mounted jade statuette carved Oriental-Style.



Jade Cove Dive Facts

HOW TO GET THERE: From the San Francisco Bay area take Highway 1 south past Big Sur. Jade Cove is right on Highway 1, 10 miles south of Lucia and about 60 miles south of Monterey. **GENERAL CONDITIONS:** Generally rough and surgy. Water temperatures vary between 48 and 55 degrees and visibility varies between three and 30 feet.

ACCOMMODATIONS: None at the cove. Be prepared for a strenuous walk down to the cove and back. Camping facilities are available at nearby Plaskett Creek and at Kirk Creek campgrounds. **SPECIAL RULES:** Jade can be taken below the high tide mark only, and mechanical equipment may not be used to haul jade and/or gear up from the beach.

LOCAL DIVE SHOPS: Stan's Skin Diving Shop, 554 S. Bascom Ave., San Jose, (408) 998-0767.

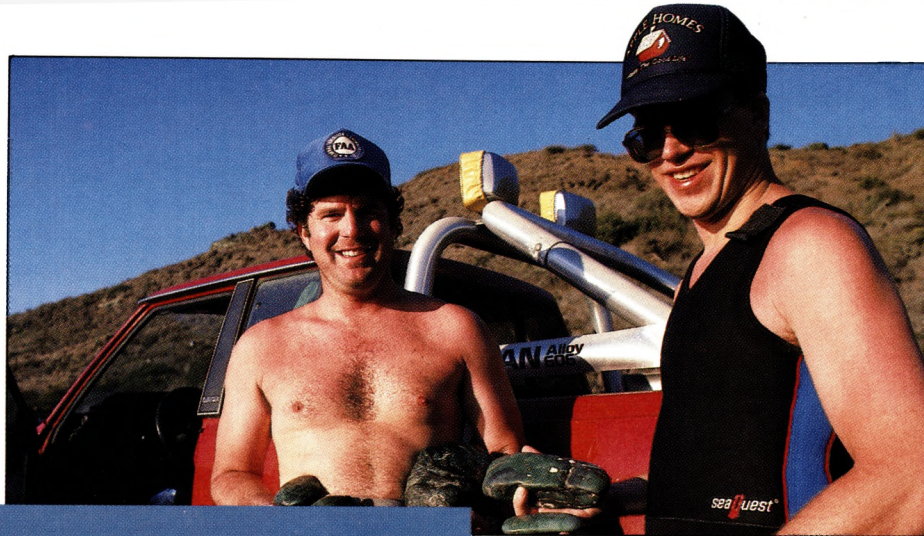
Aquarius Dive Shops located in Monterey at 2004 Del Monte Blvd., (408) 375-1933; and 32 Cannery Row (at the Breakwater), (408) 375-6605.

Bamboo Reef Dive Shop, located in Monterey at 614 Lighthouse Ave., (408) 372-1685.

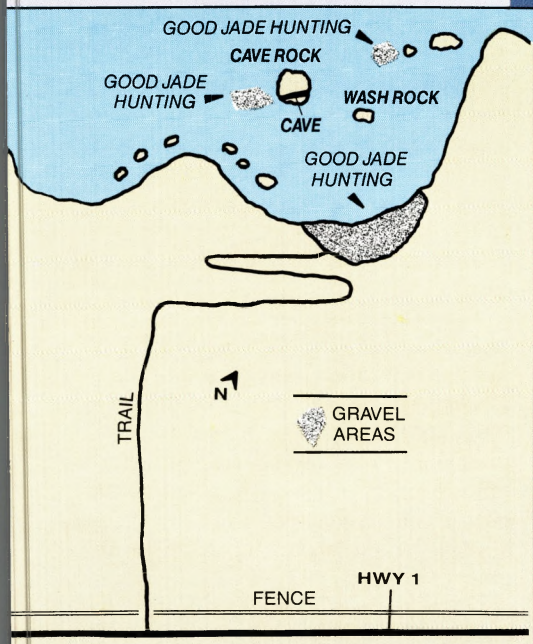
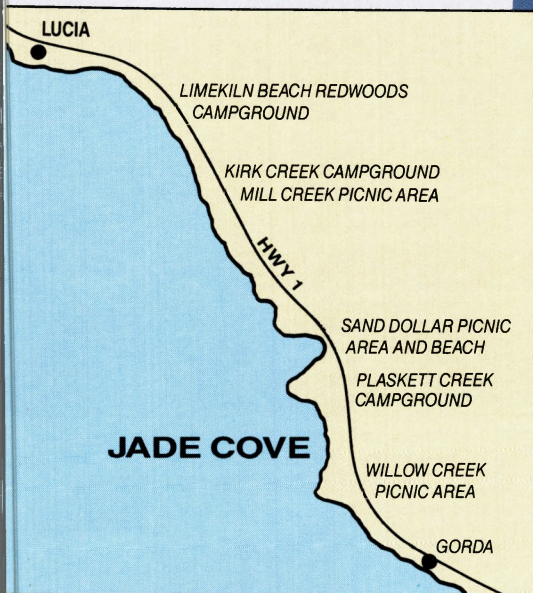
Bill's Sporting Goods, located at the pier in Cayucos, (805) 995-1703.

ADDITIONAL INFORMATION: Wet Pleasure dive shop at 2245 El Camino Real in Santa Clara offers monthly classes on how to recognize and collect jade. Call the shop at (408) 984-5819. Also, in his book *Jade Beneath the Sea — A Diving Adventure* (The Boxwood Press, Pacific Grove, CA, 1975) Don Wobber offers a good description of Jade Cove and how to dive for jade.

WEATHER/WATER REPORT: (805) 995-1703.



Divers show off the results of only one day of jade diving.



Jade Cove. For one, the hike to and from the beach in full scuba gear can be quite strenuous. This trail is a tough one; it is definitely not for the faint-at-heart or the out-of-shape. If you're not in good physical shape don't attempt the climb. If you do make the hike, make sure you're wearing sturdy shoes.

Also, the cove is not very well protected from the predominant northwesterly winds and waves. Consequently, Jade Cove can get pretty rough and surgy, even on the best days. Anybody diving Jade Cove should be proficient in rocky entries and exits.

Finally, a thick kelp bed blankets the surface of the cove in the summertime, so you'll want to carry a compass and always save enough air for returning to the beach beneath the kelp canopy.

The best time to dive Jade Cove is from

late summer through late fall, and between winter storms. Because of the lack of protection from the weather be prepared to find alternate entertainment on days when the cove is blown out. Jade fever, after all, should never be a life-threatening disease.

However, you don't have to be a diver to be a jade hunter. Tide-poolers regularly find small jade pebbles at low tide between the boulders and in the gravel areas, but the better stones are found out in deeper water.

WHAT TO DO WITH YOUR TREASURE

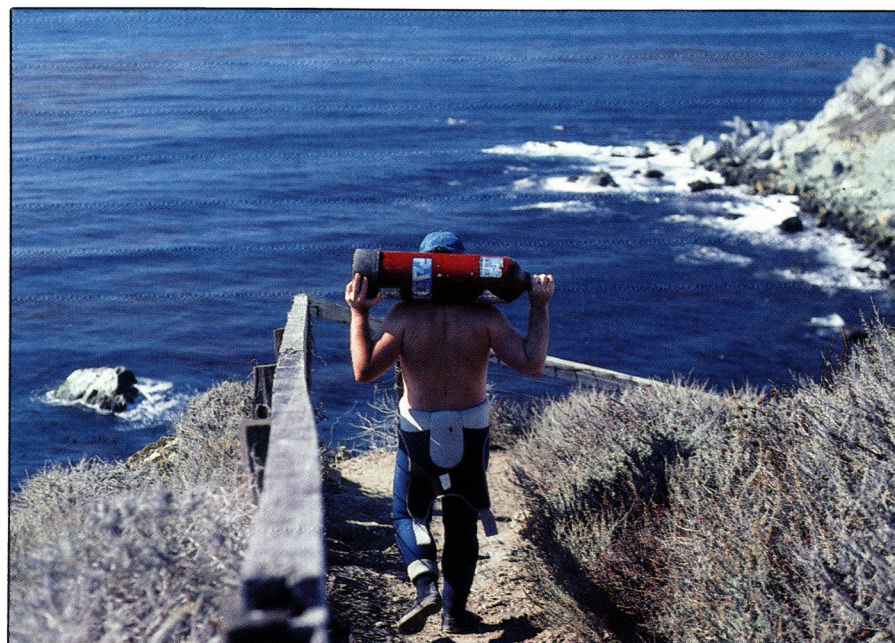
Once you find your jade, what are you supposed to do with it? The smaller pieces can be easily turned into earrings and pendants. Many find that the beauty of a sea-polished jade pebble far surpasses even intricately carved specimens.

Large pieces can be polished and displayed intact or carved into almost any shape desired. Jade is so hard and resistant to fracturing that you can carve it paper thin and into all kinds of intricate patterns and it will retain much of its strength.

Undersea treasure can take many forms, from golden doubloons in a sunken ship to a prized catch at the end of a speargun or an unforgettable moment captured by camera. In California, we are lucky enough to have yet another treasure in our local waters — genuine jade. Hold some of this green stuff in your hands for a while and just see if you don't catch the fever too. □

Bruce Watkins is a free-lance writer and photographer based in Northern California. He is currently a senior biomedical scientist at the University of California, Livermore.

The hike to and from the beach is a tough one, definitely not for the faint-at-heart or the out-of-shape.



The Rescuers

BOB TALBOT

By Joe Belanger

In the not so distant past, encounters with humans meant terror, pain, death and near extinction for gray whales. This senseless persecution has ceased and they may now see our approach as benign.

A few of these trusting, gentle animals have initiated a very different relationship with us. Perhaps they are wiser than we know. By allowing us to have personal contact with them, the gray whales have become their own best ambassadors for survival. In the process, we have learned that they are fitting objects for our respect, wonder and love.

— Francois Gohier

Recently, about a mile off the coast of Orange County, California, a helicopter crew spotted a gray whale dragging a substantial amount of netting. Later that day, marine biologists concluded that it was actually dragging portions of two different nets — gill nets, most likely picked up in Mexico. They couldn't even see the end of the trailing net because it was so heavy it sank from sight.

For three days volunteers attempted to free the whale, but to no avail. Finally, several days later, the whale was spotted off the coast of Santa Barbara in an extreme state of exhaustion. Because the whale had lost so much energy, marine biologists were able to cut the entangled nets from the whale's flukes, and the whale was finally freed.

A MIGRATION PATH STREWN WITH DEADLY TRAPS

Every year gray whales make the 10,000-mile round-trip migration from their Bering Sea feeding grounds to the mating and calving lagoons of Baja California. The southern migration begins in late summer and early fall. In February they migrate back to the arctic seas.

During the course of this annual migration, approximately 10 whales become entangled each year in gill nets and other types of fishing gear.

Since gill nets are designed to be invisible underwater, whales simply swim into them. However, hoping to escape, a whale will twist and turn, increasing the severity of its entanglement. One reported incident told of a gray whale that had wrapped itself in *four layers* of gill net.

Dead whales sometimes wash onto beaches without their flukes. According to biologists, fishermen try to reduce the amount of damage to their nets by severing the flukes of entangled whales. Doing so also hides the fact that their nets were responsible for the deaths of these whales.

Whales also occasionally entangle themselves in single lines attached to crab and lobster pots. Because of the power of gray whales, these lines become tightly cinched around the animals, making release attempts difficult if not impossible.

Even the powerful gray whale is rendered helpless in the clutches of an unmarked and unattended drift net.

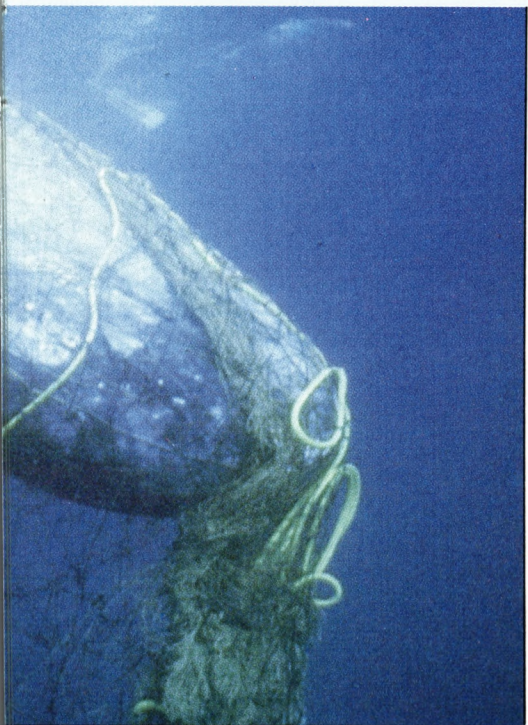
COALITION OF VOLUNTEERS RIDES TO THE RESCUE

As result of these entanglements, Southern California marine biologists, with the cooperation of the National Marine Fisheries Service (NMFS), life-guard agencies and other interested parties, formed the Whale Rescue Unit (WRU), an organization dedicated to the protection and release of whales that have become entangled in commercial fishing gear.

When an entanglement is reported, local rescue team members are notified. As soon as team members arrive at the entanglement site, they evaluate the problem, decide on the proper release methods, then implement the release plan. Each team member is knowledgeable in water safety, whale behavior and in the design and construction of commercial fishing gear.

There is no one technique for disentangling whales from gill nets; each occurrence calls for different release strategies and equipment. For example, a WRU team would use a different tech-

Volunteer members of the Whale Rescue Unit put it on the line to free marine mammals entangled in fishing nets.



nique for releasing a whale that was fully entangled from head to flukes versus an entanglement where only the flukes are wrapped.

TOOLS OF THE WHALE RELEASE TRADE

Grappling hooks are frequently used to make first contact with the whale. Rescuers use them to attach lines and large Norwegian buoys to the net trailing behind the animal. Between 100 to 200 feet of polypropylene or nylon line is used. One end is attached to a grappling hook which is attached to the net, while the other end is attached to the buoys. This process slows the whale down so rescuers have a better chance of cutting it loose. This technique also makes it easier for rescuers to relocate the whale if it happens to get away, or if the rescue attempt must be terminated due to weather conditions or nightfall.

Grappling hooks also permit rescuers to snag loose netting on the whale and, if safe, secure it to their vessel. Of course, this only works if the whale is immobilized. When one group of rescuers secured a 35-foot gray whale to the winch of their 50-foot rescue vessel, they found themselves being towed around stern-first at about two knots.

If a whale calms down enough to be approached safely, rescuers can initiate the

removal of the net. In order to cut netting in a relatively safe manner, the WRU uses specially designed knives that can be used by hand or attached to extension poles which permit rescuers to work from the decks of boats. The knives are V-shaped and designed to cut as the rescuer pulls. Being sharp only on the inner edges of the V, the knives won't cut into the whale.

WHALE BEHAVIOR DETERMINES RESCUE ACTION

When an entanglement occurs, the fate of the whale may depend on its behavior, which varies greatly between individuals. Because it's already in a very frightened state, it's usually fearful of any approach by humans. This can be very dangerous for rescuers because, aside from a gray whale diving to avoid them, they may also "head lunge," slap their pectoral fins or slap their flukes. At one point during a rescue attempt, a gray whale swatted an inflatable boat with its tail, nearly sending the rescuers into orbit.

Some gray whales, on the other hand, offer very little resistance and in fact are quite docile during the rescue. In one particular case, a gray whale had actually wrapped itself in a gill net, resembling a mummy. When rescuers arrived at the scene, the whale showed little aggression toward them, and they were able to release it by simply rolling it out of the net.

Gray whale behavior is almost always unpredictable. Rescuers will usually attempt to habituate the whale to their

presence prior to beginning a release attempt. Whales will react to the presence of vessels and increased noise levels generated by vessels' engines, or helicopters. This aspect of a rescue attempt must also be controlled by the rescue team because it can be a major hindrance to an attempted release. Once the animal and the situation are under control, the rescue team will make a release attempt.

WHALE RELEASE SUCCESS RATE REACHES 75 PERCENT

The decision to terminate a release attempt depends on several factors. These may include the whale's condition, weather and sea conditions, the loss of daylight and safety conditions as they relate to the crew. But before a release attempt is terminated, rescuers will make sure enough netting has been removed from the whale so that the possibility of further entanglement is reduced. Other rescue units are then notified of the entanglement so additional attempts to sight and release the whale can be made at other areas along the whale's migratory route.

Unfortunately, rescuers aren't able to completely free all whales. Their current success rate is around 75 percent, which appears to be increasing as they gain experience.

Currently the gray whale population is about 21,500 and increasing at an annual rate of 2.3 percent. Based on the natural mortality rate of calves and the increasing population level, biologists have determined that gray whale deaths due to commercial fishing gear entanglements are not a significant threat to the current population. But WRU members, none of whom are paid for their efforts, continue to risk their lives to save the lives of these entangled animals.

Continued

A frightened entangled gray whale up-ends a WRU inflatable.



KATHRYN MITCHELL

Entangled Whale Hot Lines

The WRU has established a coordinated response system with other rescue units and wildlife agencies designed to reduce the response time to entanglements. They have set up two phone numbers for reporting entanglements: (800) 243-3383 and (805) 687-3255.

Cetaceans found dead on the beach should be reported to the Natural History Museum of Los Angeles County at (213) 585-5105.



Gray Whale Entanglements in California (1986-1990)

Year	# Released Alive	# Stranded	# Status Unknown	Total #
1986	0	0	2	2
1987	5	3	5	13
1988	7	3	3	13
1989	2	4	4	10
1990	1	1	1	3

Released alive: Completely released from gill net.

Stranded: Found dead on shore tangled in netting, missing flukes, or with scars that are characteristic of gill net entanglements.

Status unknown: Either seen or released partially tangled, and never seen again.

Looking for Some Friendly Help

The WRU is in dire need of an 18- to 20-foot rigid keel inflatable with a 75-horse engine. Inquiries concerning the inflatable should be made to either Rick Ware at (714) 250-5555 or Tom Lewis at (213) 585-3553.



Biologist climbs onto the back of an entangled gray whale in an effort to get a better angle for cutting away the net.

Now that the marine Resources Protection Act of 1990 is law, it may help in reducing the number of whale entanglements throughout the Southern California bight. However, the law doesn't go into effect for several more years and, even when it does, there are no guarantees that entanglements will cease completely. Because of this, WRU is in dire need of donations to keep its communications system operating, to replace lost or damaged equipment and to purchase state-of-the-art rescue gear.

Donations can be sent to Whale Rescue Unit, P.O. Box 2714, Suite 239, Huntington Beach, CA 92647. Checks should be made out to the American Cetacean Society, Los Angeles Chapter, which will then make the donation available to the Whale Rescue Unit. ☐

Joe Belanger of Huntington Beach, California, is a free-lance writer and photographer as well as a professional diving instructor who holds a degree in marine science.



WORKING IN MARINE SCIENCE

Diving is so much fun, ever thought of making a career out of it?

Every diver thinks of it sooner or later: "Why not make my living doing this?" The idea of being able to turn a hobby into a vocation is wonderfully appealing, but the excitement usually lasts for only a short time before reality kicks in. A few inquiries reveal that *commercial diving* is an arduous, dangerous task with relatively few practitioners. Those courageous and muscular few who succeed make big bucks, but that pay — "compensation" in the truest sense — is typically in exchange for prolonged dives at great depths in remote locations doing tough jobs in cold, murky, current-swept conditions. Not fun.

Okay, scratch that. What about the broader area of marine science? You're right in assuming your diving experience would be an asset in gathering data or observing objects of interest. But remember, diving is only a tool, a way to deliver an informed set of eyes and an educated brain to a work site. You have the diving skills, now you need the academic ones. Your next questions would likely be 1) what other training do I need, 2) what schools should I attend to get that training, and 3) what jobs are available after I complete my education?

Taking a Look at the Job Market

Let's take the last question first. Marine science is very attractive to the general public — people are naturally drawn to thoughts of working in the field. Perhaps not surprisingly, marine biology is the most popular marine science specialty. Unfortunately, it is also the area containing the smallest number of non-academic jobs. A few marine biologists are employed as monitoring specialists by water management agencies like sanitation districts that discharge waste into the ocean. Electrical utilities that use seawater to cool the evaporators in power generating plants almost always have a handful of marine biologists on staff to watch the effects of discharged heat on local marine life and to write the reports required by the watchdog agencies. State and federal agencies employ marine biologists to read and interpret these documents and to set standards. Relatively small businesses like

private shipyards, agricultural concerns and chemical plants can't afford their own staff biologists, so private consulting firms staffed by marine biologists (and other specialists) have arisen to assist in the preparation of the environmental impact reports required of businesses under the 1972 California Coastal Zone Initiative and other legislation.

There are more jobs in physical oceanography: marine geology, ocean engineering and marine chemistry and physics. Thousands of marine geologists work for oil and mineral companies — indeed, with the increasing emphasis on offshore resources, the market for these people will probably be increasing. Marine engineers are needed in the construction and maintenance of offshore oil rigs, ships and harbor structures. Marine chemists are hard at work figuring ways to stop corrosion and extract chemicals from seawater. Physicists are vitally interested in the transmission of underwater sound and light, in the movement of the ocean, and in the role the ocean plays in the world's weather and climate. Many of these people must dive regularly to do their jobs.

Many biological and physical oceanographers are teachers and professors. Indeed, there are at least as many marine scientists employed in the academic world as there are in private industry and government. As noted above, most of these folks are marine biologists. If you like the idea of teaching (which is truly the world's greatest job), you might consider this avenue. The demand for science teachers at all educational levels is already great, and is expected to increase.

What Kind of Training do You Need?

Marine science is, of course, science. And science requires math — you need math to do chemistry, physics, statistics and measurements. If you're still in high school, make sure to take a math class every semester until you graduate. If you're already a college or university student, take a math placement test, get into an appropriate math class, and spend lots of time with it. If you've graduated from college, find a local community college and take a night class in math. Math is the

key to your further progress in *any* aspect of marine science.

Next, take classes in chemistry, physics and basic biology. Surprisingly, except for an introductory marine science class (such as general oceanography), you probably won't take any marine science coursework until your junior year. The introductory class will be especially valuable because a balanced survey of all the marine sciences can aid you in selecting an appealing specialty. Then, with a good foundation of basic science beneath you, you can begin to concentrate in that specialty.

Other skills are important, too. Certainly, the ability to write and speak well is crucial in any science job. Also critical is computer literacy (preferably DOS, not Macintosh, by the way). A second specialty such as expertise in photography, a foreign language, or the ability to field-strip and rebuild a diesel engine or hydraulic winch will put you a step above the competition at hiring time. And don't forget to make time to continue your diving — you can never have too much diving experience.

Perhaps most important at the early stage is to find a faculty member at an accredited institution who knows something about training and working in marine science. Make an appointment with him or her and ask some difficult questions. One of the best is the point-blank inquiry, "How many of your graduates got jobs last year, and where?" Take your previous school transcripts, and discuss your interests. Keep in mind that these faculty members are paid to help you reach whatever goals you have set for yourself. Sometimes you have to be persistent to get answers to your questions, but most faculty understand that the only reason they have jobs is because students have questions!

Choosing the Right Schools

The best opportunity to test your wings will be in a local community college. All community colleges offer the Big Three: math, chemistry and biology. Nearly all coastal colleges have at least one introductory-level oceanography course. Tuition is minimal; sign up and give it a shot.

Continued

Picking a transfer institution can come later, but keep a few things in mind. You'll need thorough preparation in basic science before you go; you should pick an institution with strengths in the area of your specialty (geology, biology, etc.); and you should be reasonable in your expectations of acceptance (that is, don't try for Stanford or Yale with a B- average).

If the thought of four or more years of higher education doesn't exactly appeal to you, does that mean there's no hope? Not at all. Many students begin our program at Orange Coast College with the goal of

becoming marine technicians, animal trainers at Sea World, crewmen on private yachts or working at other fascinating jobs. These jobs don't require a bachelor's degree. In the case of Sea World, the job *does* require athletic ability, extreme patience, public speaking skills, a love of animals and, of course, diving experience. Few positions are available, but there is some turnover in the ranks of junior trainers, and being hired is certainly possible.

Becoming a marine technician is an especially attractive alternative. For every

highly-trained marine scientist there are perhaps five technical assistants who actually do the experiments, maintain the equipment, work daily with the animals and build special equipment. Marine technicians tend to do a lot more diving (and other hands-on tasks) than marine scientists. Most of these folks have the equivalent of a two-year technical degree, usually from a community college.

Be Persistent, but Realistic

Don't quit your job, burn your bridges, leave your family, sell the house and dedicate yourself monk-like to marine science. Do some investigation. Nothing is as valuable as actually going out and talking to people who do things like you want to do. Ask them if they enjoy their work. Is the pay okay? Does diving comprise a

FOR EVERY HIGHLY-

TRAINED MARINE

SCIENTIST THERE ARE FIVE

TECHNICAL ASSISTANTS

WHO ACTUALLY DO THE

EXPERIMENTS.

significant part of their day? Would they start down the same road if they had it to do all over again? Also, consider staying in your present job and expanding your involvement in marine science in an informal way. Become a volunteer; join the Sierra Club, Audubon Society, Greenpeace or another environmental group. Work for your State's Fish & Game office as a seasonal aide. Attend lectures at your local community college, university extension, or dive club. In short, get involved!

Above all, if you decide to continue your education, don't be discouraged by the time it will take. Have a general view of the big picture, but proceed one semester at a time. The educational journey is itself a great pleasure. And remember, the longest journey begins with a single step. □

Dr. Tom Garrison heads the Marine Science Department at Orange Coast College, the largest undergraduate teaching department for marine science in the U.S. He holds national awards for teaching excellence from the Marine Technology Society and the Salgo-Noren Foundation, coauthored the PBS series *Oceanus*, and is the author of a new text in general oceanography soon to be published by Wadsworth.



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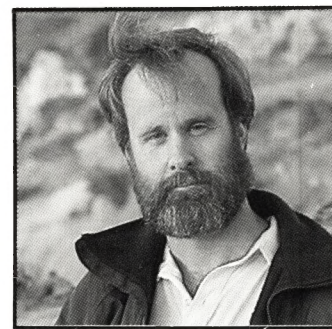
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THE CREATION OF THE CARIBBEAN SEA

That we are now able to enjoy these prime diving grounds is the result of volcanic activity, earthquakes and plate tectonics.

To the average vacationing scuba diver, the remote isles of the Caribbean may seem very quiet and restful. But take a closer look, a geologic look, and you'll find that many of these islands are seismic and volcanic time bombs that sometimes go off.

For example, early in May, 1902, Mount Pelee on the island of Martinique erupted, shattering the tranquility of this Caribbean paradise and killing 30,000 people in the town of St. Pierre. In 1843, Martinique's neighboring island of Guadeloupe exploded, killing 5,000 inhabitants. To the north, on the island of Jamaica, a massive earthquake in 1692 liquified the ground under the British colony of Port Royal. (Now covered with silt, this perfectly preserved 17th century town is an underwater archaeologist's dream.) And in more recent history, earthquakes triggering mud slides and volcanic eruptions along the west and south side of the Caribbean have plagued both Central and South America.

Why all the Geologic Commotion?

Geographically, the Caribbean Sea is defined by a string of small volcanic islands along its eastern boundary, mostly long, large islands to the north, the coastline of Colombia and Venezuela to the south and the coast of Central America to the west.

Geologically, these same boundaries mark the edge of the Caribbean plate. Along these geologic borders the Caribbean plate meets other crustal plates. The Pacific, Atlantic, North American and South America plates all intersect and interact geologically at the border lands of the Caribbean.

As at all plate boundaries, this crustal interaction forms undersea geologic formations, like deep ocean trenches (where one plate dips below another), long fault systems (where one plate slides past another), and spreading centers (where new ocean crust is formed), which combine and interact to create earthquakes and exploding volcanos.

Flanked by Volcano Arcs

The Caribbean Sea is dominated by two arcs of volcanos: those formed along the west coast of Central America, and those along the eastern edge of the Caribbean. The eastern flank is made up of a string of volcanically active islands called the Lesser Antilles. These geologic time bombs share a common, elongated pool of molten rock that was formed millions of years ago when the Atlantic plate subducted under the Caribbean plate. When a large crustal plate bends downward like this to slide under another plate it forms a deep trench like the one found east of these islands. Miles deep, this subducting plate feeds the volcanos that make up the islands of St. Kitts, Nevis, Montserrat, Guadeloupe, Dominica, Martinique, St. Lucia, St. Vincent and Grenada.

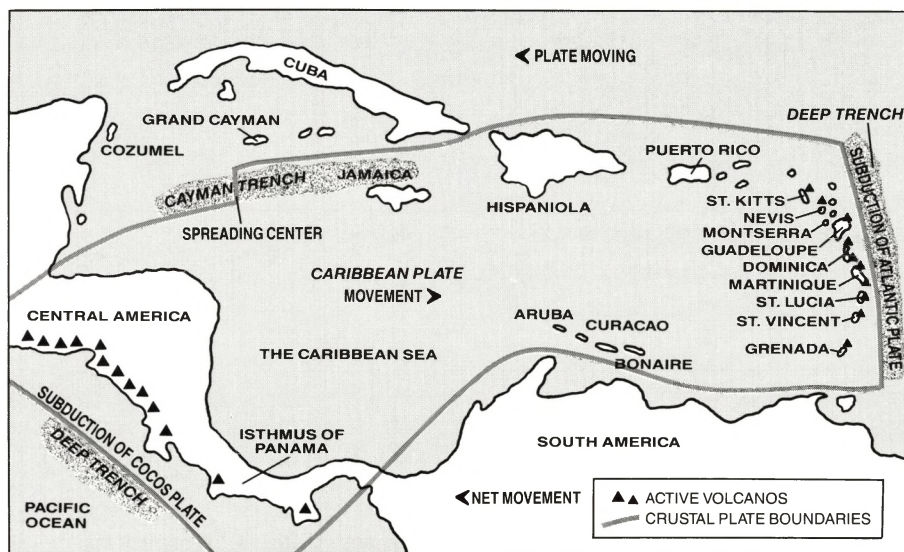
On the Pacific side of Central America the western boundary of the Caribbean plate is also marked by a deep submarine trench and a string of volcanos. The trench was formed when the Cocos plate, a small crustal plate that is part of the Pacific plate system, first collided with the

Caribbean plate forming much of what is today Central America. When this new land mass joined with the Isthmus of Panama it cut off the Caribbean from the waters of the Pacific and formed the Caribbean Sea as we know it today.

The Creation of Central America

One hundred twenty million years ago Central America, the Isthmus of Panama and the Caribbean Sea didn't even exist. At the time North and South America were much further apart, and in the wide stretch of ocean between them the Atlantic and Pacific oceans intermixed.

South and North America were both moving (as they are today) in a north-westerly direction but, as is still the case, South America was moving a little faster. As South America moved northwest it scraped up sea floor sediments along its leading edge. As these sediments began to pile up some of them folded and faulted, rising off the sea floor as small mountains which eventually broke the surface forming islands. Volcanic rock and sea sediments filled in to complete the creation of Central America. It was at this point 100



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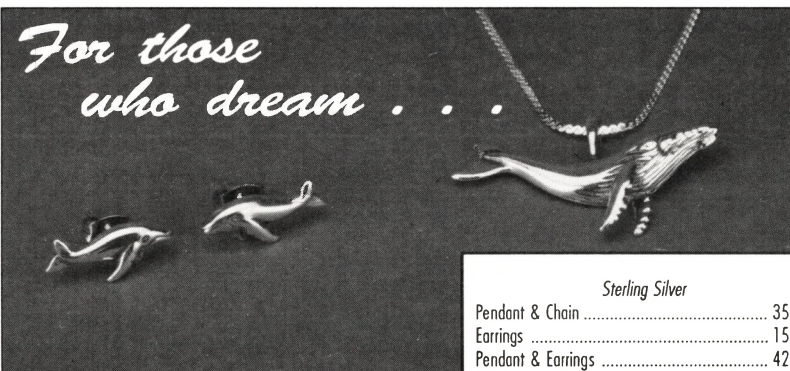


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million years ago that the Caribbean Sea was officially formed.

But it's not all Volcanos

Much of the non-volcanic island geology in the Caribbean was created by the up-lifting of the ocean bottom. This geologic force was so massive that the ocean crust itself was also fractured, faulted and pushed upward with the folding sediments. Along the southern boundary of the Caribbean, off the coast of Colombia and Venezuela, the islands of Bonaire, Curacao and Aruba exist today as a result of such uplifting.

Geologically, the southern region of the Caribbean is known for its earthquakes. Along the coast of Colombia and Venezuela the plate boundary forms a fault line. Here

YOU CAN SUM UP
THE GEOLOGY OF THE
CARIBBEAN WITH
ONE WORD —
COMPLICATED.

the South American continent moves slowly northwestward, partly squeezing the Caribbean plate to the north and partly sliding past it along the fault toward the Pacific Ocean. The movement on this fault is lateral like the San Andreas fault in California, and produces just as many earthquakes.

World's Smallest Spreading Center

Along the northern boundary of the Caribbean geologic plate there's a fault line where the North American plate slides slowly westward. This same fault system produced the earthquake that sunk the town of Port Royal, Jamaica, back in the 17th century.

But the submarine topography doesn't stop here. Along this fault zone runs a long trough. This isn't a trench formed by a subducting plate, but a long trough, like a ditch dug in the sea sediments thousands of feet deep and a thousand miles long, called the Cayman Trench.

At the bottom of the Cayman Trench is the smallest spreading center in the world, barely 100 miles long. As newly formed molten rock wells up from the interior of the Earth and then cools a solid ocean crust creates a long volcanic mountain ridge. From the crest of this north-south trending mountain range two miniature plates are formed, then pushed away from

each other — one toward the east, the other westward. The outward movement of these two miniature ocean plates as they grow larger and larger has placed a lot of stress on the surrounding rocks in this region. This, along with the sliding of the North American plate against the Caribbean plate, has caused the ocean bottom to buckle and has contributed to the major uplift and formation of the islands in the area.

Karst Topography Equals Great Diving

When ocean sediment from a shallow sea is uplifted above the level of the sea a unique geological phenomenon occurs. In a shallow, warm-water sea like the Caribbean lots of reef critters and plankton live and die, raining down on the sea bottom, forming a thick layer of limestone. These limestone layers, when elevated above sea level, are more easily eroded by rain water than any other type of rock. This erosion forms deep sink holes, caves and canyons. This type of landscape is called Karst Topography and is indicative of all the non-volcanic islands in the Caribbean.

Karst Topography is common among the islands off the South American coast and on the islands along the northern border of the Caribbean including the Yucatan Peninsula. It's a type of geologic fingerprint that tells us that northern region islands like Jamaica, the Caymans, Cozumel, Belize and parts of Hispaniola and Puerto Rico are all uplifted sea sediments.

You can sum up the geology of the Caribbean with one word — complicated. For starters, both the Pacific and Atlantic ocean bottoms are pushing their way under the Caribbean sea resulting in hundreds of volcanos both above and below sea level. Then there is the North and South American continents buckling and folding the bejeezus out of the Caribbean ocean bottom. On top of all that there is that Cayman Trench with the miniature spreading center pushing giant slabs of rock outward in two directions. No wonder the whole region is rising slowly above sea level!

As South America continues to get closer to North America the Caribbean Sea will get smaller and smaller and the folded sea bottom will rise more and more above sea level, creating a lot more earthquakes and volcanic eruptions. But the good news is, in about 10 million years there will be twice as many islands to dive! ☐

Rick Baker studied marine geology at the Moss Landing Institute at Moss Landing, California, and holds degrees in chemical oceanography and geology.

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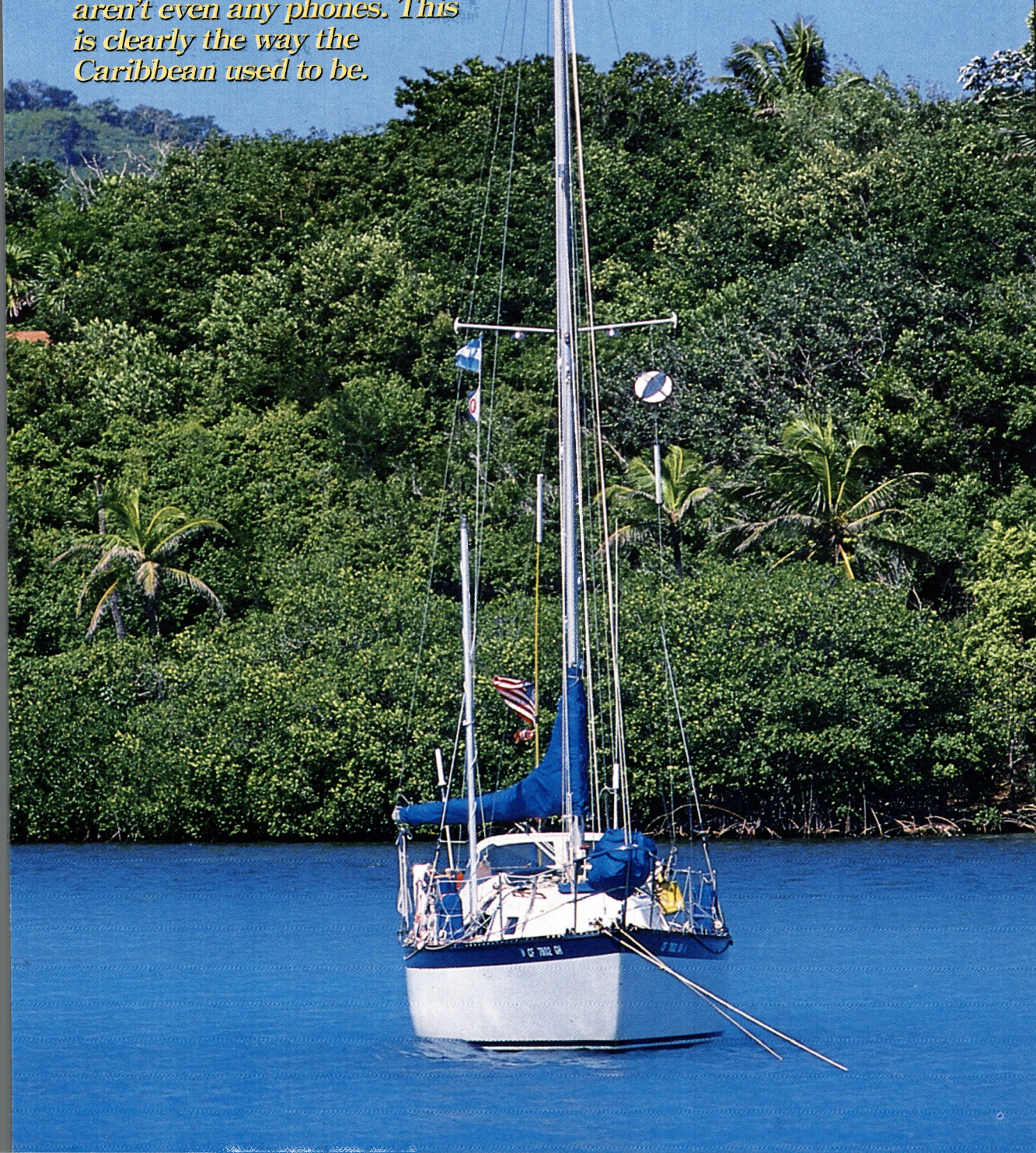
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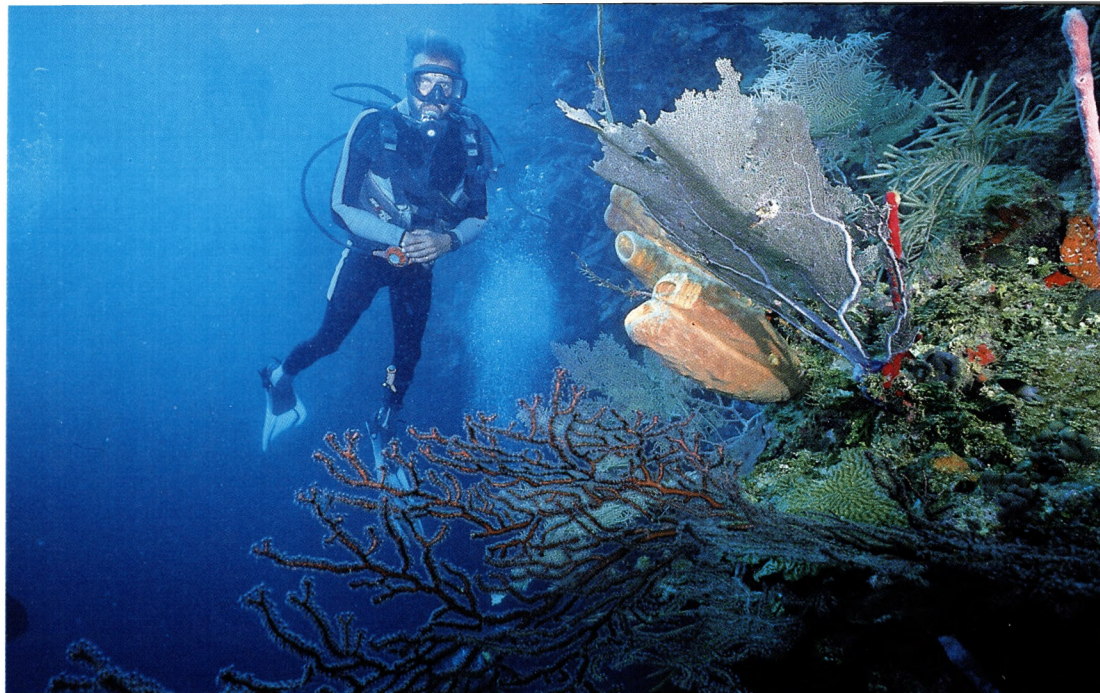
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Rendezvous in Roatan

*No fancy high-rises, there
aren't even any phones. This
is clearly the way the
Caribbean used to be.*



*Gin-clear
water, breath-
taking coral
formations;
the stuff that
has made
Roatan diving
so famous.*



Article and photos by Ed Weber

I stood in the afterglow of a blazing sunset and looked down the deserted shoreline. A gentle trade wind fluttered across the flat, glistening sea, rustling the sleeping palms overhead.

Roatan — the largest island in an indolent archipelago known as the Bay Islands which fringes the Latin American coastline of Honduras — is an idyllic tropical paradise that has been virtually untouched by the development and commercial infrastructure that seem to have threatened the integrity of many other Caribbean islands. On Roatan there are no fancy high-rise hotels, no thatched shopping plazas offering Bay Islands designer fashions and no steel band night clubs. In fact, Roatan doesn't even have any phones; communication around the island is accomplished by radio. Although a new modern vacation resort has recently opened on a private key just off Roatan, the island's shoreline consists mainly of sleepy dive resorts and miles and miles of beaches.

PARADISE — AND AT SUCH A PRICE!

But sometimes paradise has its price. For example, once deplaning and clearing customs at Roatan's small airport after a nonstop flight from Miami, much to our horror we watched the jet taxi down the runway and take off towards San Pedro Sula on the Honduran mainland — with our luggage still on board. Luckily, the next day the airline transferred our luggage back to the island. As it turned out, Roatan's airport has no runway lights, so sometimes jets have to scramble to get off the ground before dusk settles in — whether or not the luggage has been unloaded.

Aside from the delay with our equipment, our spirits remained high and we were anxious to get out and sample the diving that has made Roatan so famous. As with many of the other islands in the Bay Islands, Roatan is surrounded by a spectacular fringing reef that presents some of the best diving in the Caribbean. Of the 65 known corals found throughout the Caribbean, 63 species are known to exist off Roatan's shores.

Continued

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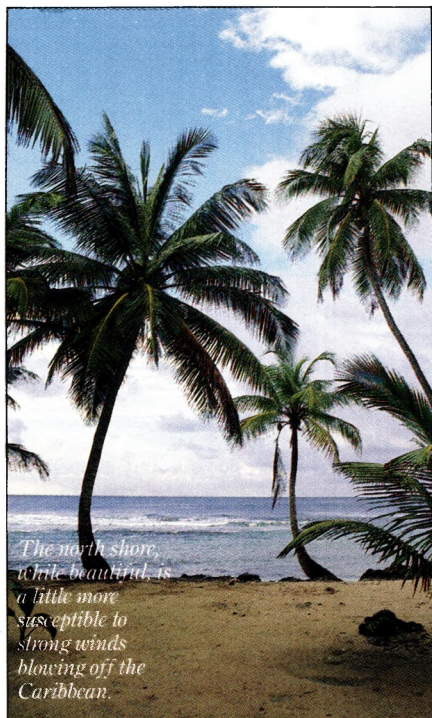
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while beautiful, is
a little more
susceptible to
strong winds
blowing off the
Caribbean.*

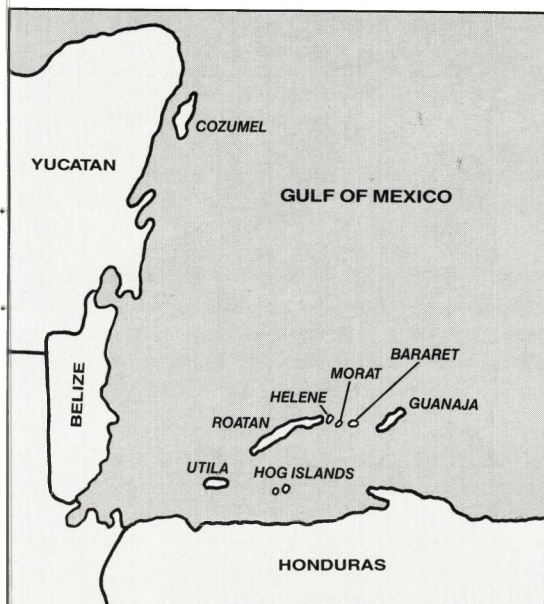
MARY'S PLACE AND MORE ALONG THE SOUTHERN SHORE

Our first stop was at CoCo View Resort, located on the south side of the island. CoCo View is a quaint, tropical diving lodge with modest accommodations and a cozy down-home feel. One of the best features of CoCo View is its incredible beach diving right off the clubhouse door. A buoy system leads divers over a sandy bottom to the beginning of the reef which starts about 100 yards offshore. The reef gives way to a 100-foot wall offering some of the best fish photography I have seen in the Caribbean. The area is a virtual Who's Who in tropical reef fish. Sergeant majors, butterflyfish, blue chromis, fairy baslets, damsels, squirrelfish and schooling French grunts crowd around the coral formations in prolific numbers. Deeper along the wall, reef sharks and spotted eagle rays patrol the reef line while opalescent reef squid



Above: Dolphins surface to greet divers on Roatan's north shore. Below: Coco View is built right on the water's edge and offers incredible beach diving right off the clubhouse door.





shimmer in the sunlit shallows of the sand chutes that lead back to shore.

In addition to the shore diving, CoCo View operates two dive boats that transport divers to the spectacular underwater canyons and gullies carved by the strong Caribbean current along the island's south side. These submerged arroyos form spectacular vertical wall dives. Fashioned into the walls are numerous caves, tunnels and coral encrusted archways that were formed by cooling lava which flowed from the mountains back when Roatan was born.

Probably the best example of this dramatic underwater topography can be found at **Mary's Place** — a gigantic volcanic fissure in the reef. The wall starts in 10 feet of water and plunges to 110 feet where an eight-foot-wide tunnel is fractured into the reef. At 50 feet a side chute leads divers through a crevice back to the reef. Giant black coral trees, vase and basket sponges line the coral fissures with schooling jacks and Bermuda chub prowling the hallways. Mary's Place is probably the best-known dive site on the island.

Another popular dive spot along Roatan's southern shore is the **Valley of the Kings**. Canyons of swaying gorgonians and sea fans give way to tumbling coral ledges and outcroppings which are marked with several caves and grottos. The deeper depths slope off to sand chutes which lead to a shale bottom.

Among the favorite dive sites along the southern side of the island are **Inside/Outside, The Gold Chain, Too Tall/Too Small** and **Forty-Foot Drop**. All sites that are frequented by dive boats are equipped with permanent moorings to avoid anchor damage to the reefs.

Resort Information

Coco View Resort, P.O. Box 877, San Antonio, FL 33576-0877; (904) 588-4131.

Fantasy Island Resort/Select Resorts Intl., 1820 the Exchange, Suite 350, Atlanta, GA 33039; (800) 6-ROATAN.

Anthony's Key Resort, 1385 Coral Way, Suite 302, Miami, FL 33145; (305) 858-DIVE.

Directly across from CoCo View and on a privately owned 15-acre key is the newest and most modern dive resort on the island. Called Fantasy Island, the resort opened in 1988 and is still under minor construction, but is fully operational. The Watersport Center, located on the beach, is a full-service PADI facility that includes

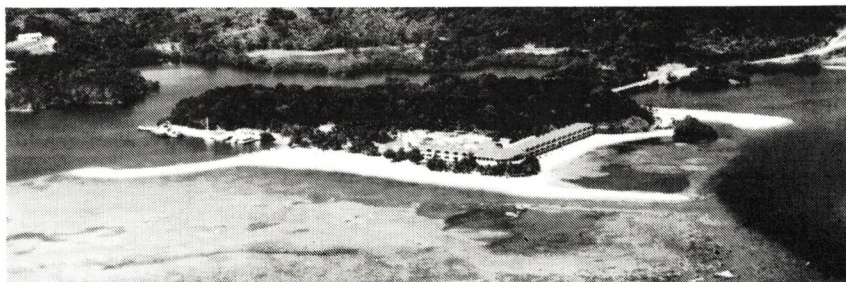
two dive boats for reef diving along the south shore.

CLASSIC TROPICAL PARADISE ON THE NORTH SHORE

After our brief sojourn on Roatan's south side, we headed across the island to the ever-popular Anthony's Key Resort, situated on the island's north shore. Anthony's Key is set in one of the most beautiful tropical settings I have ever seen. The main buildings of the resort which house the lobby, restaurant and bar are built into a lush hillside overlooking the 28-acre key for which the resort is named.

Anthony's Key itself is classic tropical island paradise with groves of swaying palms and several red macaws making a ruckus in the trees. Built along the shore of the key are 30 cabanas built on stilts over the water which take full advantage of the cool trade breeze. Each cabana is equipped with a private bath and sun deck. Guests

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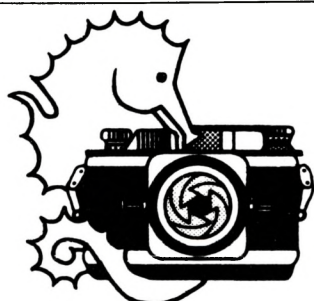
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Roatan at a Glance

The island of Roatan is 30 miles long and a mere three miles wide. It has 600-foot-high mountains coursing through its interior, and contributes to the Bay Islands population of 15,000. Roatan is a part of the democracy of Honduras which has an elected president.

The air temperature on Roatan averages around 80 degrees year-round with the rainy season running from September to December. Water temperatures range between the low 70s to 80s. Water visibility averages in the 80-foot range but winter storms can cause this to drop into the 30-foot range. On good days it is not uncommon for visibility to exceed 150 feet.

Passports are required to visit Honduras from the U.S. and a \$10 departure tax is levied at the airport upon departure from the island. Spanish is the language of the mainland, although English is widely spoken on the island.

Tan Sahsa is the national airline of Honduras and serves the gateway cities of Miami and Houston with direct daily flights to the island. The departure schedules seem to be somewhat variable and delays getting off the island are not uncommon. Be prepared.

are ferried across the small channel between the key and the main resort by small skippered boats that run most of the night.

The excellent diving facilities at Anthony's include a full-service photography center with instruction, processing and equipment rentals. The resort has three dive boats for diving the north shore.

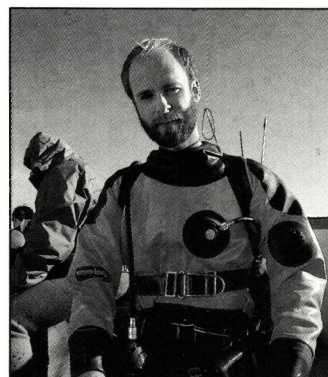
In contrast to the south side, the north side of the island has a much more tractable seascape. The diving sites are somewhat shallower and offer excellent reef diving with a few gullies and coral pinnacles that are decorated with endless varieties of colorful sponges. These northern sites, however, are a little more susceptible to inclement weather and strong winds blowing off the Caribbean.

Roatan offers some of the best diving the Caribbean has to offer and has a quality laid-back atmosphere that can unwind even the most stressed-out executive. As the advertising brochure suggests, Roatan is truly "the way the Caribbean used to be."

Ed Weber is PACIFIC DIVER's Pacific Northwest regional editor. He resides in Seattle, Washington.

BEACH DIVING MADE ALMOST EASY

Take the sting out of your beach diving with these tips from a veteran sand shark.



There's no better way to dive than off a boat, but boat diving is not always possible. So if you're one who likes to keep his fins wet, eventually you're going to find yourself down at the beach.

However, just because you're shore bound doesn't mean the diving experience has to hurt. All you have to do is use some of those "put on your gear and fall in the water" boat diving techniques to make your beach diving a breeze.

Should I Pack my Dive Gear, or my Surfboard?

The great thing about boat diving is that you don't have to devote a whole lot of analysis to determining whether or not it's a good day for diving. If 400 gallons of blue water is crashing over the bow, you know you can go into the galley and eat yourself into oblivion and not worry about it.

But beaches are sneaky. That's why if I want to head out for a day of diving come Saturday morning, a couple of days beforehand I start paying attention to the weather patterns. I rarely listen to the local television news (with the exception of San Diego's Rolland Stedam who himself is a diver), but I do perk up when they flash those satellite weather maps, great little visual aids that display storms as well as high and low pressure fronts. A quick look at a satellite map gives me a pretty good idea whether I should plan on packing my dive gear or surfboard.

To fortify the information I get off the weather maps, I usually dial the local weather report. These are often recorded by lifeguards who have just come off the beach, and for the most part they're pretty accurate. The reports also include tidal information (ideally, the best beach diving is done at or near high tide).

Armed with the promise of sunny skies and calm seas, by early Saturday morning I'm on the road, roaring down to the beach so I can grab a parking space within spitting distance of the dive site. Then I normally take a walk on the beach with a cup of coffee and just watch the ocean for

a while. About 10 minutes of observation is usually all it takes to figure out what's happening in the way of shore currents, what the swell intervals are and, most importantly, if the lifeguards have unlocked the restrooms yet.

One final pre-dive item I check for is where the nearest telephone is located, and what local emergency procedures are used for dealing with diving-related accidents in the area. This information is available either from lifeguard stations, local dive stores or often from other divers on the beach.

underwater terrain, but also because the rocky topside areas provide places to escape from the sand.

I like to take advantage of these rocky areas by setting up my base camp there. It's not bad, laying out my gear, a folding chair and, of course, a mega-lunch ice chest. Sure, it takes a couple of trips to get it all down to the beach, but I figure if I'm making a day of it, it's worth the effort.

On the other hand, if I'm planning on doing a "quickie" one-tank beach dive, I usually just suit up at the car, and with fins and mask in hand I troop on down the



A demonstration of the "California Twist," a favorite entry technique among fanatical beach divers.

DARREN DOUGLASS

Setting up Camp Without Getting Covered in Sand

Now I'm ready to start putting some of those "fall in the water" boat diving skills into effect. But first, just like on a dive boat where I have to haul my gear down to the docks, here on shore I have to haul my gear down the hill from the car. It's perhaps the most unpleasant aspect of the entire beach diving experience (with the possible exception of hauling it all back *up* again), but I have yet to find a way around it short of hiring gear bearers, and so far I have found no takers.

Most good beach diving is done in rocky coves where reefs are a reasonable kicking distance from shore. This is a good thing, not only because of the interesting

stairs, across the beach and right into the water. Then after my dive, I pull my mask and fins off and walk right out of the water, up the stairs and back to my car, leaving beach-goers to wonder who that masked man was.

Beach Entries: as Easy as Boat Entries — Almost

Under ideal beach dive conditions, entering the water from the rocks is every bit as easy as stepping out of an entry gate on a dive boat. I employ a variety of techniques, depending upon the situation, including a standard giant stride, a forward roll, or my all-time favorite, the California Twist (this fancy maneuver involves holding onto your mask and weightbelt and throwing yourself out over the water,

deftly splashing onto your side, shoulder first. It's quite stylish — when it works).

Whatever type of entry you happen to use, don't forget about the surge. On days of moderate surf, the water column in front of your launching point may drop two to four feet, depending upon the position of the swell. Needless to say, timing is everything. Watch the water, time the wave intervals and jump in when the water level is highest. This way you experience a minimum air drop and the outgoing water will carry you away from the rocks.

Making a rocky exit requires a deft sense of timing as well. I move in close to the landing zone, watching and waiting for the incoming water to rush in and do the work for me. When I pull it off right, the water lifts me up and deposits me relatively gently on all fours up on the rocks. Then I crawl up to higher ground and remove my fins.

If there is no rocky area and I have to go off the sand beach, different techniques are required, especially if a shore break is present (a two- to three-foot shore break doesn't cause me to abort the dive, just pay attention to my entries and exits). And that's the case with most divers who are able to match their skills to beach conditions. Still, occasionally someone isn't paying attention or mis-gauges an entry or exit and ends up blasted all over the beach minus several pieces of equipment.

Like all aspects of my diving, I like to make sandy beach entries and exits as easy on myself as possible. Although divers are supposed to pull on fins at the water's edge and back into the surf, when conditions are calm I just carry my fins and walk into water deep enough to support the dive gear on my back, then pull on my fins and swim out to sea.

Of course, what works in placid conditions does not necessarily work when dealing with surf. High surf can preclude diving altogether, especially at beaches with long, gradual slopes. However, beaches with steep and deep slopes that have angry shore breaks (Zuma Beach in Southern California and Monastery Beach in Northern California, for example) do not necessarily preclude diving, because past the impact zone the water can be placid.

When I enter the water during high surf conditions, I strap all my gear securely in place, hold onto my weightbelt and mask, and lean into the oncoming surf. If the waves are strong and the sets consistent, I release all the air from my BC, drop into two or three feet of water and then swim out on scuba beneath the breaking waves. Once past the surf line, I surface and continue to the dive site using my snorkel.

Beach Diving Preparations

When I go beach diving, I always bring a small cooler with mineral water or juice to stay hydrated. If several dives are going to be made, I throw some fruit and other high energy eatables in the cooler as well. Other items of importance are sunglasses and sunscreen. Also, I never forget my Save-A-Dive kit, a small watertight box with spare O-rings, mask and fin straps, snorkel keepers and first aid items.

If I have to make my base camp in the sand, I bring along a four-by-four-foot tarpaulin on which to lay my gear. Oh yeah; don't forget a pocketful of quarters for those infernal parking meters.



Making a rocky exit requires a deft sense of timing and some help from your friends.

DARREN DOUGLASS

If a diver gets tossed up onto the beach, it usually happens during an exit when fatigue is an issue. So when returning to shore I not only reverse my entry procedures but make an effort to stay just as focused on the task at hand as I do when I enter the water.

Of course, if the surf is too high, I don't think twice about canceling the day's diving and embarking on a more appropriate activity, like taking a snooze on the beach.

Maintain a Beachin' Attitude

Be an ambassador for your diving colleagues. Don't litter the beach or use residents' garden hoses to rinse off your gear. If you see garbage on the beach, pick it up. Be polite and courteous to beach residents. If you arrive early in the morning or late at night, keep it quiet. Divers are highly visible to beach residents. Let's break out of this negative stereotype. We may not make all beach residents fellow divers, but we can at least try to make them our friends.

Maintain Course with Sharp Navigation Skills

Successful beach divers tend to be adept at underwater navigation. Being able to make sure you can keep a straight course out to the reef and back to shore can save a lot of time, energy and air. To be a good navigator you have to start paying attention up on the beach, and be prepared to take into account natural signs that you can use in conjunction with your compass.

I usually begin my personal navigation briefing on the beach, where I try to determine wind and current conditions before entering the water. Most beaches are affected by wind-driven long-shore currents that increase in strength later in the day and subside as night falls.

By not taking these currents into account, there's a good chance that you could end up in the wrong cove upon surfacing from your dive, or never make it to the desired diving site to begin with.

Another way I maintain my bearings underwater is by studying underwater conditions. Often I will line up specific rock piles or recognizable kelp stalks to determine a course of travel, and merely meander from spot to spot. In sandy areas, the ocean will often form ripples in the sand that run in patterns parallel to the shoreline. The crests of these ripples face shore. The closer to shore, the wider apart the ripples are.

By applying some of the above-mentioned tricks, I've found that beach diving can be a lot of fun. In fact, it looks pretty nice out today. Sunny and clear, the surf report just issued six-inch ankle-slapper surf, and high tide is in two hours. Sounds to me like a good time to stage an amphibious assault down at the local dive cove, and still get back in time to mow the lawn this afternoon. □

Darren Douglass is a veteran diving instructor holding certificates with several major certification agencies.

Zen and the Art of Keeping Warm

“We’re going to have a special PACIFIC DIVER boat trip for staff and friends, and I hope you can join us,” the Chief

said.

“That’s great! I’d love it,” I replied. Finally a freebie was coming my way. Free dive trips don’t pay the rent, but they can take some of the sting out of poverty.

“We’re going to have a free breakfast for everyone,” the Chief continued, “and free air fills and a free steak dinner afterwards.”

“Wow! Sign me up!”

“A lot of people are looking forward to meeting Baja John,” the Chief went on, patting me on the back. “Especially some of the newer divers.”

Uh-oh. A hero I’m not. I’m just a klutz like everyone else, and I don’t think I can carry off a Mike Nelson act. This could be embarrassing.

On the other hand, I guess that’s part of being a magazine “personality.” Besides, this does sound like a great dive trip, and it’s free. “I’ll do it,” I told him.

“And it’ll only cost you \$55!” the Chief exclaimed.

My lucky day.

Which brings us to the night before the dive. My old junker gasps to a halt at San Pedro’s 22nd Street Landing, and I punch out the tape called *Beat your Boss with Brain Power* (something about how you can use your mental powers telepathically to control your supervisor’s brain. Sounds goofy, but who knows?).

I lock up and heave my gear bag out of the trunk. The *Golden Doubloon* lies in her slip under blazing floodlights. Three or four early-arriving divers stand around the aft deck sipping coffee. Grabbing my gear bag in a bear hug I stump down the ramp and literally wrestle it across the wet deck. The twinge in my back reminds me why I shouldn’t have put my weightbelt in the bag, but if I didn’t I’d sure as hell leave it behind, either at home or in the car or on the boat later on. So I have to spot the bag 26 pounds. That makes it a pretty even match, but I win the first fall, toss it in a heap and, panting, shove it under the bench.

I straighten up to find the Chief sitting at his ease, intent on doing something

technical to his regulator. And what a regulator it is! The Chief turns it this way and that, polished steel sparkles in the floodlights, catching everyone’s eye. A forest of hoses is attached to the first stage, thanks to an adapter like that octopus plug you use at Christmastime to plug all the tree lights and the illuminated manger scene and the TV into one outlet. I count hoses for a second stage, a safe second, a BC and a pressure gauge, but what about the rest? No doubt they attach to something serious and professional, judging by the Chief’s purposeful expression as he carefully turns a wrench. No doubt he would like us to think so, judging by his surreptitious glances to see who’s watching.

My own rig is a battered gray 72 strapped to an old-fashioned backpack, with a regulator that’s overdue for an overhaul if truth be told. I begin to feel ashamed of it, and I guess I should, because times have changed. I admit it, the new equipment not only looks flashy but works better than the old stuff. I suppose people expect “Baja John” to be a crusty old vet who sneers at these newfangled gee-gaws, and I do, but I wish I had every one of them. The Chief opens his custom gear bag and slips his regulator into its own fitted, foam-lined compartment as if to rub it in.

But one advantage of the simple, old-fashioned equipment, I tell myself the next morning while stuffing myself into my farmer john, is that it’s quicker to put on. By this time, most of the other divers know I’m the very minor celebrity who writes this column. It’s just as embarrassing as I expected to be thought more expert than I know I am, but what can you do except keep plugging along? All I know is that it now seems absurdly important for me to do this thing right. No fumbling with straps, no wasted motion and no rushing either. I tell myself, just pull on the familiar old gear, quick, cool and business-like, and get on with it. I might not have the latest equipment but I’ve done this routine a million times.

So it’s no surprise that I’m one of the first divers to the gate. Bob Wilson, the dive master, makes some friendly remarks about my horse collar (“I used to have one of those — a long, long time ago.”), I give



By John Francis

him my dive number, stretch the mask over my head and *ping!* a plastic buckle flies overboard while the mask comes loose in my hand. All dressed up and nowhere to go, I try not to look at the line of divers behind me who are watching quietly. But a quick-witted photographer has hollered “Get it! Get it!” and a diver already in the water rescues the buckle. Patiently, keeping his good humor, Bob fixes my mask for me. In a minute I’m in the water and in a different world, thank God.

The conditions are just about ideal if you don’t count the cold, which just goes with the territory. The water is clear and still, the kelp forest grows out of the gloom 100 feet down in patterns of sunlight and shade. I drift along pathways and through clearings as though walking through the woods, thinking about absolutely nothing.

Back on the boat, I drop my tank but leave my wetsuit on — it’s cold! Walking around the boat, trying to find a side that’s sunny yet out of the wind, I run into the Chief. He looks very spruce indeed in his designer long johns he wears under his drysuit. Isn’t he cold? “Of course not,” he says, as if “cold” were some 19th century concept.

Captain Greg pops out of the cabin and addresses the Chief: “Is PACIFIC DIVER paying for the sodas *and* beer, or just the sodas?” In the moment of hesitation I remember the *Beat your Boss* tape. Quickly, I focus all my mental powers on sending a silent telepathic command to the Chief’s brain: *beer yes beer yes beer yes please!*

But it’s hopeless. Supposedly, psychic power can levitate automobiles and stop locomotives in their tracks, but that’s nothing when the Chief likes sodas and doesn’t like beer. “Sodas? Sure, we’ll pick up the tab on the sodas,” he says, grandly. “But let ‘em buy their own goddam beer!”

Great. Well, it’s too cold for beer anyway.

Time for the second dive, and once again I’m quick to the gate. My mask seems to be holding together this time, so

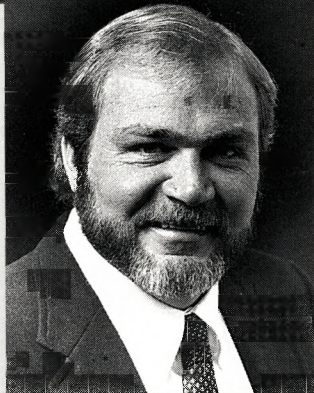
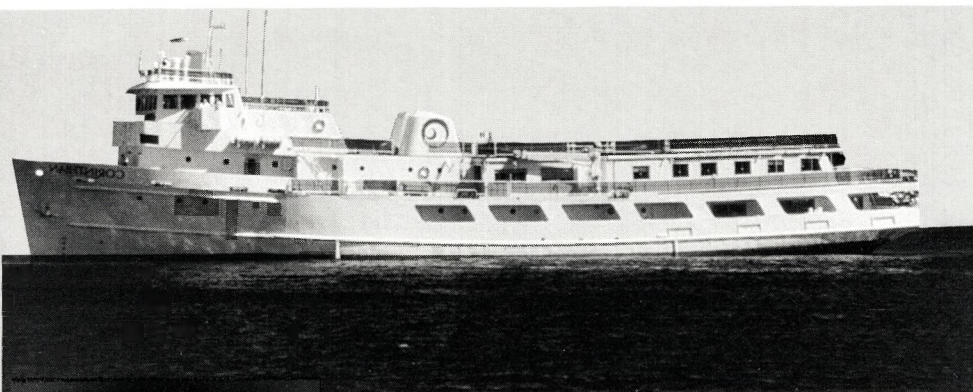
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Gilliam Introduces New Dive Ship to Cruise the Bay Islands

A new dedicated dive ship will start its inaugural voyages in the fall of 1991. Bret Gilliam, president of Sea Ventures, announced that their 217-foot vessel will begin its Roatan-based operations to explore the best of the Bay Islands on weekly cruises limited to only 60 divers.

Gilliam is a 20-year industry veteran who owned dive resorts and live-aboard vessels in the Virgin Islands until the mid-'80s, and was most recently involved as vice-president of diving operations for Ocean Quest Intl. He left that company in April of 1990. "I wanted to concentrate on a serious dive ship that could really offer a unique program. I felt other live-aboards were a little too small while the Ocean Quest ship was too big and plagued by chaotic management that never understood or appreciated the diving market," says Gilliam. "With Sea Ventures we have hit a niche that will satisfy even the most aggressive diver and still allow us to pamper our guests due to the ship's size and comforts."

According to Gilliam, the ship will access many areas of the Bay Islands that were previously unreachable to existing live-



Bret Gilliam.

aboards. This is accomplished by using the ship's three 46-foot custom dive boats to whisk small groups to the best sites. Six dives are scheduled daily plus night dives, allowing the "hard-core" diver to make 40-plus dives per voyage. Diving on computers is welcomed and total diving

freedom is allowed.

"The experienced diver has long been ignored as diving programs seem more and more geared to the lowest common denominator," observes Gilliam. "You just can't mix seasoned veterans with entry-level divers. That's why we built three large dive boats to support the ship. This allows us to customize our boat groups to best accommodate the experience level and interests of everyone. And to support new divers and those completing training, we add extra dive instructor staff on that boat and choose sites appropriate for their transitional growth during the week. This way everybody wins, and no one feels compromised."

The \$6-million Sea Ventures vessel features fully air-conditioned private cabins, meals served in a scenic dining room, two comfortable lounges and a gigantic

110-foot by 45-foot sundeck complete with a bar and two Jacuzzis. There is even an on-board Satdish for divers in need of a football game or a CNN news fix.

"Dive as much or as little as you want," invites Gilliam. Non-divers will have plenty to keep them busy with superb beaches, snorkeling and a wide variety of daily excursions to the various islands. "But our product is diving," stresses Gilliam. "We make no pretenses to be a cruise ship. Our entire staff is committed to providing the very best diving vacation available. We want to break new ground with a true diver's ship in one of the most exciting diving areas in the Caribbean."

For more information on Sea Ventures' new dive ship, write to Sea Ventures, 3 Blue Heron Dr., Brunswick, ME 04011; or give them a call at (207) 442-9042.

Two New Church Photo Courses Scheduled for Truk Aggressor

Jim Church will teach two new underwater photography courses aboard the new *Truk Aggressor*, April 28 through May 5 and August 25 through September 1, 1991. These courses are for still and video photographers wishing to shoot slide shows or video movies. For details, contact the Aggressor Fleet at (800) 348-2628. To contact Jim directly, write to P.O. Box 80, Gilroy, CA 95021, or call (408) 842-9682.

Goddess Leads 17-Day Dive Trip to Malaysia's Sipadan Island

Bob Goddess, president of Tropical Adventures Travel, will be escorting a special 17-day diving adventure to remote Sipadan Island off the coast of Borneo, Malaysia. In addition to diving some of the world's most ex-

hilarating drop-offs, this trip is timed for the mating season of huge green turtles. This trip will also visit the famed orangutan sanctuaries and include several unique jungle excursions.

The trip departs September 1991. For more information contact Tropical Adventures Travel, 111 Second North, Seattle, WA 98109; (800) 247-3483 or (206) 441-3483.

Three Top Island Dive Operations Create the "Hawaiian Dive Connection"

Ocean Adventures of Oahu, Central Pacific Divers of Maui and King Kamehameha Divers of Kona have formed a new organization called "Hawaiian Dive Connection." These PADI IDC facilities place an emphasis on customer service and are able to plan and book your Hawaii dive vacations. Air fare, rental car, hotel/condo and diving packages can be arranged for all of your travel needs. The packages can be

Divi Resorts Offers Discounted Vacations for Military Personnel

Divi Resorts is offering a 25 percent discount at any of its beachfront resorts to all U.S. military personnel. For those returning from "Operation Desert Storm," Divi has set up a "Resort of the Month" club, which will feature a 40 percent discount on the normal resort rates at selected facilities throughout the year. Some travel

restrictions do apply.

Divi operates 11 resorts in the Caribbean, and a number of them are home to "Peter Hughes Diving." For more information contact a travel agent or Divi Resorts at 54 Gunderman Rd., Ithaca, NY 14850; (607) 277-3484. Divi's toll-free reservation number is (800) 367-3483.

Bonaire Resort Offers "Ultimate Dive Package"

For diving enthusiasts or first-timers taking the plunge, Harbour Village Beach Resort on the island of Bonaire in the Dutch West Indies has created a deluxe diving package that combines luxury accommodations, world-class cuisine, uncrowded beaches and some of the world's most spectacular dive sites.

The resort has just launched "The Ultimate Dive Package," a seven-day program including ac-

booked from any city in the U.S. and can be a single or multi-island dive vacation. The Hawaiian Dive Connection travel service saves valuable travel dollars and ensures a first-rate Hawaiian dive adventure.

For information call the "Hawaiian Dive Connection" at (800) 835-5991, or contact King Kamehameha Divers at (800) 525-PADI, Ocean Adventures at (800) 676-7877 or Central Pacific Divers at (800) 551-6767.

commodations in a luxury suite, a full breakfast daily and unlimited diving. The package is priced at \$1,500 per person, double occupancy.

The resort is located on Bonaire's west side and features a quarter-mile stretch of private beach. For more information, dial (800) 424-0004.

Red Sail Sports Announces its Fifth Watersports Operation

Red Sail Sports has been named the watersports operator for the Ritz-Carlton Mauna Lani on the Big Island of Hawaii. As the Ritz's recreation concessionaire, Red Sail Sports will service guests who want to dip into the Pacific or cruise down a scenic mountain road during their stay on the Big Island.

Whether you are an advanced diver, or just want to "test the water" with a one-day resort course, Red Sail Sports has a scuba package to suit. An experienced crew of PADI and NAUI instructors and the custom-designed 38-foot Delta dive boat, *Lanai Kai*, guide all levels of divers to spectacular sites along the Kohala

Select Club Med Resorts Offer "Serious" Dive Programs

Four Club Med resorts now cater to serious dive travelers. Club Med Turquoise in Turks & Caicos, Club Med Sonora Bay in Mexico, Club Med St. Lucia in St. Lucia and Club Med Moorea in Tahiti all offer the Club Med "intensive" scuba diving program. These four resorts provide PADI training and certifications (Club Med is working closely with PADI to incorporate the PADI system of

diver education at their resorts), full-service dive facilities, boats equipped for diver support and at least two single-tank boat dives daily.

The PADI Travel Network has been contacted as the exclusive dive industry travel wholesaler for Club Med, so for more information contact your local PADI dive center, or call the PADI Travel Network at (800) 729-7234, Ext. 7.

Coast.

Like the diversity of the Big Island, Red Sail Sports offers a variety of dive and watersports packages that provide the uncommon blend of Ritz-Carlton luxury with pure diving pleasure on the high seas. For more package and rate information, call toll free (800) 255-6425; for groups and on-island, (808) 885-2876.

Paul Humann Featured Aboard Cayman Aggressor III

Paul Humann, author-photographer of the recently published book *Reef Fish*, will be on the

Cayman Aggressor III March 16-23, 1991, to teach his new system of identifying and recording the many fish seen in the Caribbean.

Each evening Paul will teach reef fish identification with a series of beautiful slide lecture presentations. As a bonus, he will also be giving several talks about marine invertebrates from his most successful "Sea Talks" series. For photographers, he will be available to answer questions and give advice on how to capture fish on film.

For more information, contact Aggressor Fleet Limited, P.O. Drawer K, Morgan City, LA 70381; 1 (800) 348-2628.

Harbour Village Offers Full-Service Diving on Bonaire

For many years Bonaire has been acclaimed as one of the top scuba diving destinations in the world, featuring pristine blue waters and breathtaking coral reefs. Harbour Village, located right on the beach, offers visiting divers reefs and caves to explore less than 100 yards from the beach. The fully trained staff can handle all dive arrangements, from filling a tank to arranging for a guided tour.

Additional information and reservations services are available by calling (800) 424-0004.

THE AMERICAN HEART ASSOCIATION MEMORIAL PROGRAM.



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American Heart Association

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READER SERVICE

DIVE STORES

1. **BLACK BART'S AQUATICS** — Full dive store in El Toro.
2. **MARINA DEL REY DIVERS** — Sales, rentals and all levels of instruction.
3. **PACIFIC SPORTING GOODS** — Full selection of dive products in Long Beach.
4. **SILENT WORLD** — Full facility dive store in Seattle, Washington.

DIVE BOATS

5. **AGRESSOR FLEET** — Live-aboard dive boats in 7 exciting location.
6. **THE DIVE BOAT 'PEACE'** — Dive boat out of Ventura, Southern California.
7. **GOLDEN DOUBLOON CHARTERS** — Dive boat out of San Pedro, Southern California.
8. **KING KAMEHAMEHA** — Dive Boat & Dive Store in Kailua-Kona, Hawaii.
9. **KONA AGGRESSOR** — Luxurious dive boat out of Kona, Hawaii.
10. **R.C. DIVERS** — Dive boat information out of San Diego.

EQUIPMENT

11. **BEUCHAT** — Complete line of diving equipment.
12. **PRINCETON TECTONICS** — Diving accessories. Send for product information.

13. **SHERWOOD WEST** — Complete line of diving equipment.

14. **TABATA, U.S.A.** — Complete line of diving equipment.

PHOTOGRAPHY

15. **AB SEA PHOTO** — Camera repair, rentals, service, sales and instruction.
16. **CAMERA TECH** — Camera repair, rentals, service, sales and instruction.
17. **HELIX** — A full product line catalog.
18. **JIM CHURCH UNDERSEA PHOTOGRAPHY** — Complete underwater photography courses and photo expeditions.
19. **PACIFIC CAMERA SERVICE** — Nikonos specialist, free information on lens, camera and flash repair.

RESORTS & TRAVEL

20. **ALM ANTILLEAN AIRLINES** — The 5-Star Airline to the best diving in the Caribbean.
21. **AQUATICS KAUAI** — Dive boat, dive store and packages in Kauai.
22. **CATALINA DIVING RESORTS** — Boat & shore diving packages from Catalina Island.
23. **HAWAIIAN DIVE CONNECTION** — Expert travel service allows you to plan a single or multi-island Hawaii trip including airfare, accommodation, rental car and diving. Just one call!
24. **KONA COAST DIVERS** — Dive boat, dive store and packages in Hawaii.
25. **LAHAINA DIVERS** — Dive boat, dive store

and packages in Maui.

26. **SCUBA VOYAGES** — Dive travel experts for great vacations packages. Send for information.
27. **SEA VENTURES** — Unique and varied weekly diving expeditions on the world's largest ship in the Caribbean.
28. **SMALL HOPE BAY LODGE** — Twenty beach front cottages on Andros Island, Bahamas.
29. **TROPICAL ADVENTURES** — Travel coordination for exciting dive trips.

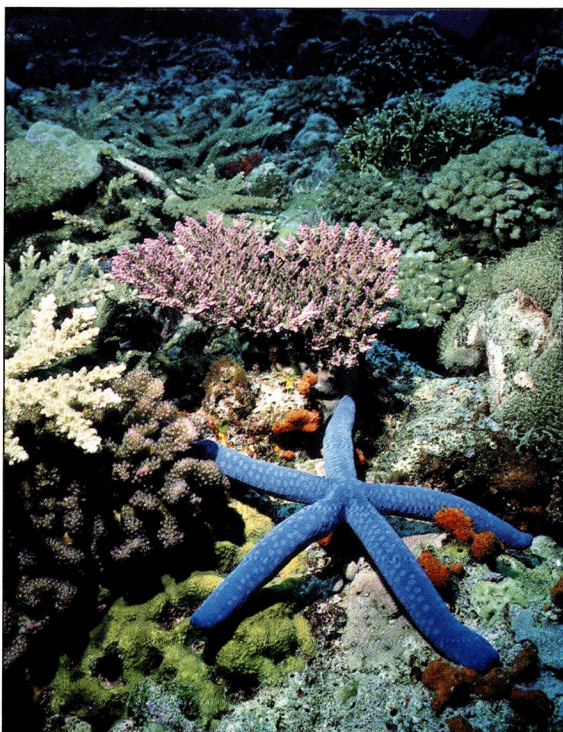
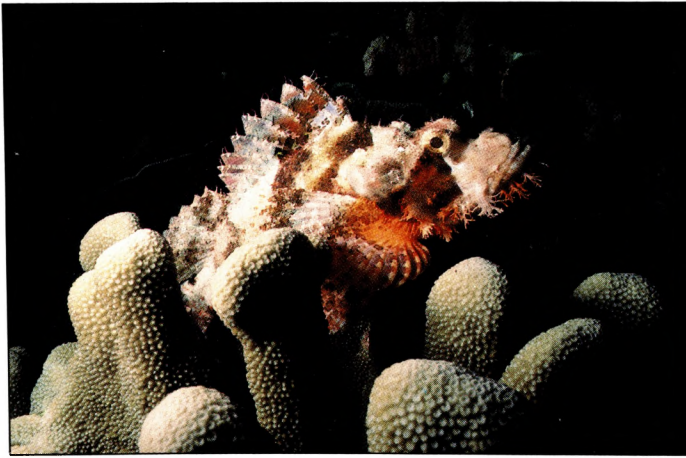
MISCELLANEOUS

30. **CAYMAN CARIBBEAN VENTURES** — Condominiums — Grand Cayman — Excellent terms, send for information.
31. **M. HOLT MARKETING CONCEPTS** — Book — "Cayman Islands — The Paradise Tax Haven. Send for more information.
32. **DAN (Divers Alert Network)** — A membership that makes diving safer — every time. Send for more information.
33. **PORT-A-MARINE** — Full service for Achilles, Avon, Novurania Inflatables. Mercury & Yamaha outboards and custom accessories.
34. **WOMAN DIVER** — Quarterly newsletter featuring scuba adventures, safe travel, fitness, health, equipment reviews, hotel discounts, plus inspiring profiles of women who dive professionally.

Circle the appropriate number on the attached reader service card.

How to Put on a Block-Buster Slide Show

Article and photos by Nancy Sefton



Top: Grouping similar species can be educational. The Pacific scorpionfish and the lionfish, for example, are relatives. Middle: Grouping animals with similar behavior patterns also generates interest, like the Caribbean's diamond blenny and the Pacific's clownfish, which both dwell among anemones. Bottom: For a diving audience, a wide-angle shot can be followed by a close-up of one of its elements, as in this study of a Pacific staghorn coral colony.

I know people who are experts at avoiding invitations to slide shows. And I can understand why. There's an art to projecting slides, just as there is an art to taking creative pictures. The big challenge for photographers, then, is to present your work in such a way that your audience doesn't end up sitting there in the dark wishing they had stayed home to watch reruns of *Magnum P.I.*

Having witnessed too many awful slide shows, I've become paranoid about giving shows of my own. So I've adopted some rules for showing slides that have been gleaned from too many evenings sitting in other people's living rooms fighting off sleep as the screen before me blinked on and off in agonizing monotony.

A NO-DOZE SLIDE SHOW

We underwater photographers, novices and experts alike, tend to fall desperately in love with our own pictures. Consequently, we have a tendency to overlook flaws in our photos that are painfully obvious to others — like shots that are out of focus, incorrectly exposed, or marred by the presence of unplanned objects (like the tip of someone's flipper).

Nostalgia, too, is a photographer's enemy. A washed-out shot of your favorite dive buddy in some exotic locale may evoke memories for you that reach far beyond the cardboard mount. But you have to remember that your audience is seeing only the projected image, and that image happens to be washed out.

To produce a no-doze slide show, begin by classifying each of your photos as "good," "better" or "best" (when evaluating shots for a slide show, there's no such thing as a "fair" or "poor" classification). Here are some things to look for when judging your work:

1) **Composition.** Good composition will determine whether or not a slide is a crowd-pleaser. There should be an obvious subject. Underwater, it's tempting to take "salad bowl" shots, ones in which no single element is highlighted or featured. Discard any slides that have no clear subject for your eye to fasten on to. Also, your subject should be positioned well within the frame, not disappearing off to one side.

2) **Exposure.** View enough slides and eventually your own eye will be able to tell whether a photograph is properly exposed or not. Overexposure (too much light striking the film) results in washed out colors and a rather glaring overall picture. Dark, underexposed slides suffer from lack of detail, muted colors and an obscured

subject. To best judge exposure, project your slides on a screen; don't be content merely with light box or natural illumination.

3) **Focus.** Focus is perhaps the most important element of a slide show image. Simply holding a slide up to a window, or staring at it with a bare eye on a light box, tells you little about its sharpness. Use a loupe (a magnifier made for viewing 35mm slides). As long as your subject is in focus, other parts of the picture need not be perfectly sharp.

A good show can usually be measured by the quality of the slides that you leave in the box. *Show ONLY your best work.*

TELL A STORY WITH YOUR SLIDES

Once you've assembled your top slides, arrange them into some kind of meaningful order. In other words, tell a story.

For example, if your slides are of a dive vacation, perhaps you could start with a few shots that establish the setting. A title slide is an effective opener, but you needn't pay a photo lab to create one. While at your destination, photograph the airport welcome sign, an island signpost, your resort logo, the name of the dive boat, or anything else that provides a sense of "place." A quick series of shots like these at the start of your show should immediately grab your audience's interest.

Next, briefly show activity aboard the dive boat, like divers gearing up. Then jump right in (splash!) and begin your underwater section with reef scenics or overviews that establish the setting. Be sure to include shots of divers as well as marine animals.

Gradually get closer to the reef with animal portraits, grouping similar creatures together. There's nothing more frustrating than hearing apologies from the slide show presenter like "Whoops! Here's that shot of the octopus again. Oh-oh, there that little sucker is again!"

If you're showing slides to other scuba divers, follow up animal portraits with a close-up of the same creature. A wide view of a soft coral colony, followed by a two-inch shot of the polyps themselves, would be a good example. However, if your audience consists of nondivers, coral polyps and fish eyeballs will mean little and therefore will have little impact on them. For nondivers stick with scenics, fish portraits and shots of divers.

If you know enough about your subjects, a slide show can be as educational as it is entertaining. One obvious method of organizing your slides is by grouping the animals into their proper biological

families. Another method might involve behavior patterns; for example, animals that filter-feed as distinguished from carnivores that hunt for their food. I frequently group animals according to their methods of self-defense, such as the stinging powers of sea anemones used by small fish that reside among the tentacles.

Wrap up your underwater sequence with a shot of your dive buddy hanging on the anchor line at 10 feet. Then, if you still have some time, return to the boat or the beach for a few above-water scenes. Finally, close with a solid farewell scene. It may sound trite, but a striking sunset still makes a great parting shot.

TIMING IS EVERYTHING

Keep in mind the overall length of your show (it's always a good idea to time your shows in advance). I have a 40-minute maximum on all my shows (I prefer 30 minutes), and never do I project more than 80 slides at one sitting.

A single slide should remain on the screen only five or six seconds, unless someone protests. If you are narrating, stick to the subject of that specific slide. How many times have you squirmed while Uncle Charlie narrated a slide show of last summer's trip to Yosemite, making comments like "Well now, this is Big Dome. Boy, it sure was a hassle getting there. A big old bus broke down and blocked traffic for 30 minutes..." About now Aunt Lucy is kicking him in the shins, and everyone else is wishing they could do the same.

If your slides are really heart-stoppers, you may want to forego narration altogether and use background music instead. In fact, music is such a soothing element that I usually play it softly in the background even if I'm narrating.

Listen throughout your show for audience reactions. Sustained silence means no one is impressed, which means you're in trouble. On the other hand, the occasional "Oh my!" means that someone is paying attention. You know you've got a winner when a muffled "Wow!" erupts from your audience (pay attention to the slides that elicit these reactions, and use that information when assembling your next show).

When the screen finally fades to black and the lights go on, if you hear a unanimous "Is that all there is?" only then will you know that you've scored. □

Nancy Sefton is a writer/photographer from Washington who spends most of her time diving the waters of the Caribbean.

DIVE BOAT SCHEDULES

MONTEREY

Cypress Sea, 408/244-4438

Breakwater Cove Marina
50/20 Divers/Capt. Tim Smith
All trips to Monterey/Carmel areas.
Available daily.

Silver Prince, 408/394-4235

Monterey Wharf II
40/15 Divers/Capt. Gary Goulart, Bert Weiner
Call number above for open boats.
Operates on weekdays upon request.

March:

- 2 Ukiah Skin & Scuba, 707/462-5396
- 3 A.M. Scuba Plus, 209/957-2822
P.M. Olympic Scuba School, 415/933-6045
- 9 Undersea Adventures, 415/838-2348
10 A.M. Valley Skindiving, 209/333-2343
P.M. Sports Cove, 707/448-9454
- 15 Open Boat
- 16 A.M. Pacific Offshore Divers, 408/263-3483
P.M. Scuba Discoveries, 415/369-2483
- 17 Scuba Town, 415/939-3483
- 23 A.M. Bamboo Reef, 415/362-6694
P.M. Open Boat
- 24 Valley Aquatics, 209/527-2822
- 30 Open Boat

April:

- 5 Open Boat
- 6 Aqua Marine, 408/377-2841
- 7 A.M. American Aquatic Adv., 209/578-0515
P.M. Scuba Plus, 209/957-2822
- 13 A.M. Undersea Adventures, 415/838-2348
P.M. Scuba Discoveries, 415/369-3483
- 14 Valley Skindiving, 209/333-2343
- 19 Open Boat
- 20 A.M. Valley Aquatics, 209/527-2822
P.M. Pacific Offshore Divers, 408/265-3483
- 21 A.M. Get Down Divers, 408/438-3795
P.M. Olympic Scuba Schools, 415/933-6045
- 27 Bamboo Reef, 415/362-6694
- 28 A.M. Stan's Skindiving, 408/998-0767
P.M. Olympic Scuba Schools, 415/933-6045

May:

- 3 Open Boat
- 5 A.M. Rohnert Park Dive Ctr., 707/584-2323
P.M. Olympic Scuba Schools, 415/933-6045
- 11 Undersea Adventures, 415/838-2348
- 12 A.M. Valley Aquatics, 209/527-2822
P.M. Scuba Plus, 209/957-2822
- 17 Open Boat
- 18 A.M. Pacific Offshore Divers, 408/265-3483
P.M. Scuba Discoveries, 415/369-3483
- 19 Scuba Town, 415/939-3483
- 25 A.M. Bamboo Reef, 415/362-6694
P.M. Open Boat
- 26 Stan's Skindiving, 408/998-0767

Xeno, 408/426-7376

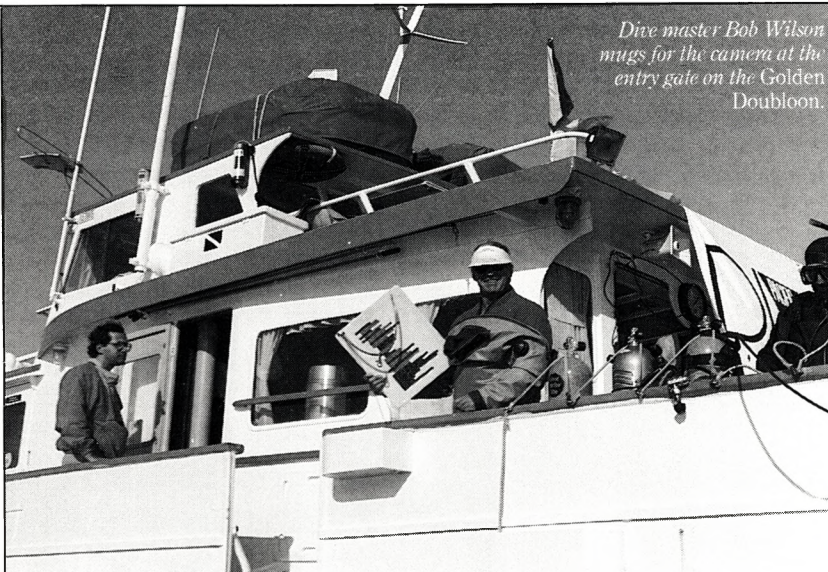
38/16 Divers/Capt. Jon Capella
Available seven days a week.

SANTA BARBARA

Conception, 805/962-1127, 805/963-3564

Sea Landing Breakwater
75/40 Divers/Capt. Jerry Boylan

STEVE ESSIG



Dive master Bob Wilson mugs for the camera at the entry gate on the Golden Doubloon.

March:

- 1-2 Sea Sabres, 213/947-0625
- 3-4 Valley Scuba (1/2), 916/891-5041
Sports Cove (1/2), 707/448-9454
- 8-9 UC Santa Cruz, 408/429-5519
- 10-11 Blue Fins (1/2), 800/622-5833
Desert Divers (1/2), 702/438-1000
- 15-16 Ocean Funatics, 408/479-8117
- 29-30 Aqua Adventures, 818/848-2163

April:

- 5-7 Scuba Discoveries, 415/777-3483
- 12-14 I-See, 408/629-8496
- 19-20 Tom Campbell's Dive & Travel, 805/965-4951
- 21-22 Truth Aquatics Dive, 805/962-1127
- 25-27 Cal School of Diving, 415/644-2373

May:

- 3-5 Marin Skin Diving, 415/479-4332
- 10-12 Ocean Funatics, 408/479-8117
- 17-18 Truth Aquatics Dive, 805/962-1127
- 25-27 Ocean Odyssey, 408/475-3483
- 28-29 UC Santa Cruz, 408/462-5409
- 31-6/1 Discovery Charters (1/2), 818/790-8276
B.E.N.T. Dive Club (1/2), 213/375-7121

Truth, 805/962-1127, 805/963-3564

Sea Landing Breakwater
68/40 Divers/Capt. Bill Yznaga
Call numbers above for open boats.

March:

- 2-4 Any Water Sports, 408/244-4433
- 8-9 Sea Sons (1/2), 714/735-3284
B.E.N.T. Dive Club (1/2), 213/375-7121
- 14-16 Ocean Odyssey, 408/475-3483
- 23-25 Scuba Plus, 209/957-2822

April:

- 6-7 Blue Fins, 800/622-5833
- 19-20 Ocean Odyssey, 408/475-3483

May:

- 3-5 Aqua Adventures, 818/848-2163
- 18-20 Flipper Dippers (1/2), 408/358-3995
Peninsula Diving Center (1/2), 415/965-2241
- 25-27 Pinnacles Dive Center, 707/542-3100

Vision, 805/962-1127, 805/963-3564

Sea Landing Breakwater
90/40 Divers/Capt. Robbie Church

March:

- 1-3 Bill Finstad, 415/949-0344
- 7-9 Discovery Charters, 818/790-8276
- 14-16 Valley Aquatics, 209/527-2822
- 17-19 Truth Aquatics Dive, 805/962-1127
- 29-31 Bill Finstad, 415/949-0344

April:

- 6-8 Bamboo Reef, 415/362-6694
- 12 PACIFIC DIVER DIVE BOAT DAY, 714/361-9765
- 13-15 Anchor Shack, 415/825-4960
- 19-21 Dave Faught, 408/446-5416
- 26-28 Bill Finstad, 415/949-0344

May:

- 10-11 Discovery Charters, 818/790-8276
- 17-18 Any Water Sports, 408/244-4433
- 25-27 Blue Fins, 800/622-5833
- 28-29 UC Berkeley, 415/642-1298
- 31-6/1 Bill Finstad, 415/949-0344

VENTURA

Chieftain, 805/652-2166

Ventura Harbor
50/20 Divers/Capt. David Rentfrow
Supplies Dacor weightbelt systems.
Call number above for open boats.

March:

- 1 Santa Cruz: Open Boat
- 2 Anacapa: Gold Coast Scuba, 805/652-0321
- 3 Santa Cruz/Anacapa: Gold Coast Scuba, 805/652-0321
- 6 Santa Cruz/Anacapa: Open Boat
- 8 Santa Cruz/Anacapa: Open Boat
- 9 Santa Cruz/Anacapa: Open Boat
- 10 Closed Charter
- 13 Night Dive: Gold Coast Scuba, 805/652-0321
- 15 Santa Cruz/Anacapa: Open Boat
- 16 Santa Cruz/Anacapa: Open Boat
- 17 Santa Cruz/Anacapa: Open Boat
- 20 Santa Cruz/Anacapa: Open Boat
- 22 Santa Cruz/Anacapa: Open Boat
- 23 Santa Cruz/Anacapa: Gold Coast Scuba, 805/652-0321
- 24 Santa Cruz/Anacapa: Aqua Ventures, 805/484-1594
- 27 Santa Cruz/Anacapa: Open Boat
- 29 Santa Cruz/Anacapa: Open Boat
- 30 Santa Cruz/Anacapa: Open Boat
- 31 Santa Cruz/Anacapa: Aqua Ventures, 805/484-1594

April:

- 6 Anacapa/Santa Cruz: Open Boat
- 7 Anacapa/Santa Cruz: Open Boat
- 13 Anacapa/Santa Cruz: Open Boat
- 14 Anacapa/Santa Cruz: Open Boat
- 20 Marina del Rey Divers, 213/827-1131
- 21 Anacapa/Santa Cruz: Open Boat (1/2) Blue Cheer (1/2),

- Frog, 805/833-3781
- 7 Santa Cruz/Anacapa: Gold Coast Scuba, 805/652-0321
- 10 Santa Cruz/Anacapa: Open Boat
- 12 Santa Cruz/Anacapa: Open Boat
- 13 Santa Cruz/Anacapa: Open Boat
- 14 Closed Charter
- 17 Santa Cruz/Anacapa: Open Boat
- 19 Santa Cruz/Anacapa: Open Boat
- 20 Santa Cruz/Anacapa: Aqua Ventures, 805/484-1594
- 21 Santa Cruz/Anacapa: Open Boat
- 24 Santa Cruz/Anacapa: Open Boat
- 26 Santa Cruz/Anacapa: Open Boat
- 27 Santa Cruz/Anacapa: Aqua Ventures, 805/484-1594
- 28 Santa Cruz/Anacapa: Gold Coast Scuba, 805/652-0321

Liberty, 805/483-6612

Ventura Harbor Village
85/40 Divers/Capt. Al Anderson
Call number above for open boats.

March:

- 2 Anacapa/Santa Cruz: Open Boat
- 3 Anacapa/Santa Cruz: Open Boat
- 9 Not Available
- 10 Not Available
- 16 Anacapa/Santa Cruz: Open Boat (1/2)
- Ventura Dive & Sport (1/2), 805/650-6500
- 17 Anacapa/Santa Cruz: West Coast Divers Supply, 818/708-8137
- 23 Anacapa/Santa Cruz: Open Boat
- 24 Anacapa/Santa Cruz: Scuba Duba, 818/881-4545
- 30 Anacapa/Santa Cruz: Open Boat
- 31 Anacapa/Santa Cruz: Open Boat (1/2) Scuba Duba (1/2), 818/881-4545

April:

- 6 Anacapa/Santa Cruz: Open Boat
- 7 Anacapa/Santa Cruz: Open Boat
- 13 Anacapa/Santa Cruz: Open Boat
- 14 Anacapa/Santa Cruz: Open Boat
- 20 Marina del Rey Divers, 213/827-1131
- 21 Anacapa/Santa Cruz: Open Boat (1/2) Blue Cheer (1/2),

213/828-1217

- 27 Santa Rosa: Water Water, 805/985-3091
- 28 Anacapa/Santa Cruz: Pt. Hueneme Aquatics, 805/984-3483

May:

- 4 Anacapa/Santa Cruz: Sport Chalet, 818/790-9800
- 5 Anacapa/Santa Cruz: Open Boat
- 11 Anacapa/Santa Cruz: Open Boat
- 18 Anacapa/Santa Cruz: West Coast Divers, 818/708-8137
- 19 Anacapa/Santa Cruz: Blue Cheer, 213/828-1217
- 25 Anacapa/Santa Cruz: Water Water, 805/985-3091
- 26 Anacapa/Santa Cruz: West Coast Divers, 818/708-8137
- 27 Anacapa/Santa Cruz: Open Boat

Peace, 805/658-8286

Ventura Harbor Village
65/32 Divers/Capt. Bill Magee
Call number above for open boats.

March:

- 1-3 Ken Snodgrass, 415/449-4736
- 6 Santa Rosa: Open Boat
- 7-9 Stu's Scuba Tours, 415/686-6111
- 10-12 Aqua Tu Tu's, 415/489-4036
- 13 San Nicolas: Open Boat
- 14 Anacapa/Santa Cruz: Open Boat
- 15-17 Anderson's Dive Shop, 415/355-3050
- 19-20 Bugs-R-U's, 805/658-8286
- 21 Anacapa/Santa Cruz: Open Boat
- 22 PACIFIC DIVER DIVE BOAT DAY, 714/361-9765
- 23 Five Star Instructional Group, 213/399-4386
- 24 Channel Islands Scuba, 805/644-3483
- 27 Gull Island: Open Boat
- 28 Anacapa/Santa Cruz: Open Boat
- 30-31 Island Packers, 805/642-1393

April:

- 3 Santa Rosa: Open Boat
- 4 Anacapa/Santa Cruz: Open Boat
- 6 Ventura Dive & Sport, 805/650-6500
- 7 Scuba Escape, 213/391-3119
- 10 San Miguel: Open Boat
- 11 Anacapa/Santa Cruz: Open Boat
- 13 West Coast Divers Supply, 818/708-8136
- 14 Scuba Duba Dive, 818/881-4545
- 17 Gull Island: Open Boat
- 18 Santa Cruz: Open Boat
- 20 Five Star Instructional Group, 213/399-4386
- 21 Channel Islands Scuba, 805/644-3483
- 24 Santa Rosa: Open Boat
- 25 Anacapa/Santa Cruz: Open Boat
- 27 Tai Lee, 818/360-1836
- 28 Channel Islands UPS, 805/643-1404

May:

- 11 Gull Island: Open Boat
- 2 Anacapa/Santa Cruz: Open Boat
- 4 Ventura Dive & Sport, 805/650-6500
- 5 West Coast Divers Supply, 818/708-8136
- 8 Santa Rosa: Open Boat
- 9 Anacapa/Santa Cruz: Open Boat
- 10-11 TRW Sea Divers, 213/372-7764
- 12 Captain Frog, 805/833-3781
- 15 San Miguel: Open Boat
- 16 Anacapa/Santa Cruz: Open Boat
- 18 Five Star Instructional Group, 213/399-4386
- 19 Channel Islands Scuba, 805/644-3483
- 22 Santa Rosa: Open Boat
- 23 Anacapa/Santa Cruz: Open Boat

DIVE BOAT SCHEDULES

25-27 World Sea Adventures,
916/487-7433
29 Santa Rosa: Open Boat
30 Anacapa/Santa Cruz: Open Boat

Scuba Luv'er, 818/346-4799

Ventura Harbor Village
65/35 Divers/Capt. Phil Bordini
Call number above for all charter information.

March:

- 1 Smugglers Cove
- 2 Anacapa Pinnacles
- 3 Anacapa Arches
- 6 Midweek Special
- 8 Fish Bowl/Anacapa
- 9 Blue Banks
- 10 Scorpion/Santa Cruz
- 13 Midweek Special
- 15 Shark Photo Expedition
- 16 Day-Night Lobster
- 17 Last Chance Lobster
- 20 Midweek Special
- 22 Winfield Scott Wreck
- 23 Sea Lion Rookery
- 24 Blue Banks
- 27 Midweek Special
- 29 Smugglers Cove
- 30 Radar Towers
- 31 Scorpion/Santa Cruz

April:

- 3 Midweek Special
- 5 Sea Lion Rookery
- 6 Blue Banks, Santa Cruz
- 7 Scorpion Cove, Santa Cruz
- 10 Midweek Special
- 12 Portuguese Rock
- 13 Sand Stone
- 14 Santa Cruz
- 17 Midweek Special
- 19 Shark Photo Expedition
- 20 Yellow Banks
- 21 Santa Cruz
- 24 Midweek Special
- 26 Anacapa Pinnacles
- 27 Anacapa Arches
- 28 Winfield Scott Wreck
- 31 Midweek Special

May:

- 1 Midweek Special
- 3 Smugglers Cove
- 4 Sea Lion Rookery
- 5 Anacapa Arches
- 8 Midweek Special
- 10 Winfield Scott Wreck
- 11 Radar Towers
- 12 Scorpion/Santa Cruz
- 15 Midweek Special
- 17 Shark Photo Expedition
- 18 Sand Stone
- 19 Santa Cruz
- 22 Midweek Special
- 24 Fish Bowl
- 25 Blue Banks
- 26 Santa Cruz
- 29 Midweek Special
- 31 Kelp Forests

Spectre, 805/483-6612

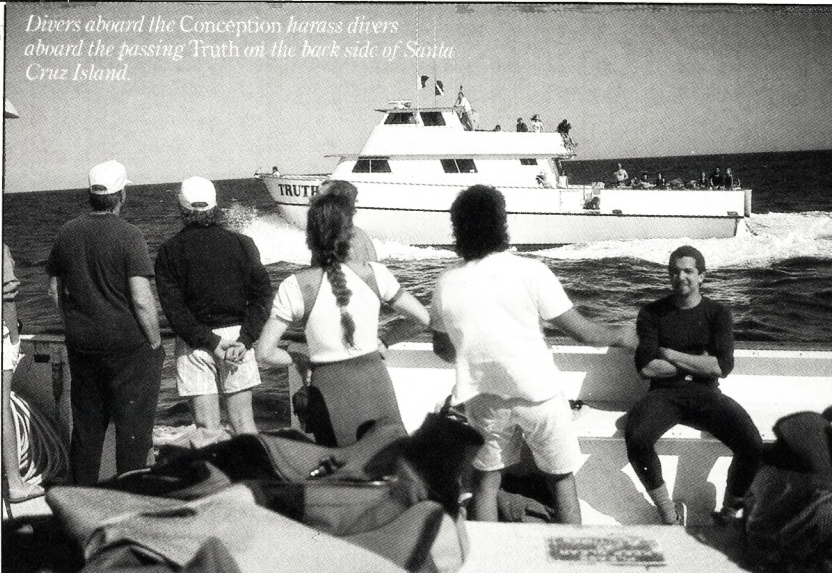
Ventura Harbor Village
85/36 Divers/Capt. Ted Cumming
Call number above for open boats.

March:

- 2 Anacapa/Santa Cruz: Blue Cheer (1/2), 213/828-1217
- Innerspace (1/2), 805/399-1425
- 3 Anacapa/Santa Cruz: Santa Barb Aquatics, 805/964-8689
- 8 Anacapa Game Reserve: Open Boat
- 9 Anacapa/Santa Cruz: Capt. Frog (1/2), 805/833-3781
- Water Water (1/2), 805/985-3091
- 10 Anacapa-Day/Night: Far West, 805/495-3600
- 15-16 Outer Islands: Explorers Club, 805/483-6612
- 17 Anacapa-Day/Night: Blue Cheer (1/2), 213/828-1217
- Scuba Duba (1/2), 818/881-4545
- 23 Anacapa/Santa Cruz: Sport Chalet, 818/790-9800
- 24 Anacapa/Santa Cruz: Pt. Hueneme Aquatics, 805/984-3483
- 30 San Miguel: Open Boat
- 31 Anacapa/Santa Cruz: Marina del Rey, 213/827-1131

Divers aboard the Conception harass divers aboard the passing Truth on the bark side of Santa Cruz Island.

RICK BAKER



April:

- 6 Anacapa/Santa Cruz: Blue Cheer (1/2), 213/828-1217
- Spectre (1/2), 805/483-6612
- 7 Anacapa/Santa Cruz: Sport Chalet, 818/790-9800
- 12 Anacapa Game Reserve: Open Boat
- 13 Anacapa/Santa Cruz: Open Boat
- 14 Anacapa/Santa Cruz: Scuba Duba (1/2), 818/881-4545
- Innerspace (1/2), 805/399-1425
- 19 Outer Islands: Explorers Club, 805/483-6612
- 20 Anacapa/Santa Cruz: Santa Barb. Aquatics, 805/964-8689
- 21 Anacapa/Santa Cruz: Far West, 805/495-3600
- 27 Anacapa/Santa Cruz: Sport Chalet, 818/790-9800
- 28 Anacapa/Santa Cruz: Scuba Duba, 818/881-4545

May:

- 4 Captain Frog, 805/833-3781
- 5 Anacapa/Santa Cruz: Blue Cheer (1/2), 213/828-1217
- Innerspace (1/2), 805/399-1425
- 10 Anacapa Game Reserve: Open Boat
- 11 Anacapa/Santa Cruz: L.A. UPS, 213/545-0513
- 12 Anacapa/Santa Cruz: Scuba Duba, 818/881-4545
- 17 Outer Islands: Explorers Club, 805/483-6612
- 18 Anacapa/Santa Cruz: Sport Chalet, 818/790-9800
- 19 Anacapa/Santa Cruz: Far West, 805/495-3600
- 25 Anacapa/Santa Cruz: Santa Barb. Aquatics, 805/964-8689
- 26 Anacapa/Santa Cruz: Scuba Duba, 818/881-4545
- 27 Anacapa/Santa Cruz: Ventura Dive (1/2), 805/650-6500
- Open Boat (1/2), 805/483-6612

Tradewinds, 805/658-9152

Ventura Harbor Village
17/4 Divers (min. 2)/
Capt. Michael deMartino
Available 7 days a week.

CHANNEL ISLANDS

Sandy Bay, 213/828-2418

32/6 Divers/Capt. Bob Perry
Call for available dates.

PORT HUENEME

Sea Ventures, 805/985-1100

Sportfishing Landing
55/28 Divers/Capt. Mickey Defazio
Call for available dates.

SAN PEDRO

Atlantis, 714/894-4518

22nd St. Landing
65/35 Divers/Capt. Dave Fink, Brian Dull
Call number above for charter information.

March:

- 2 Sport Chalet, 818/790-9800
- 3 Pacific Sculpins, 213/425-1108
- 9 Sport Chalet, 818/790-9800
- 10 Available for Charter
- 16 Sport Chalet, 818/790-9800
- 17 Openwater Habitat, 714/744-8355
- 23 Sport Chalet, 818/790-9800
- 24 Sport Chalet, 818/790-9800
- 30 Pasadena Scuba, 818/796-2000

April:

- 6 Sport Chalet, 818/790-9800
- 7 Pasadena Scuba Travel, 818/796-2000
- 13 Sport Chalet, 818/790-9800
- 14 Available for Charter
- 20 Sport Chalet, 818/790-9800
- 21 Pasadena Scuba Travel, 818/796-2000
- 27 Sport Chalet, 818/790-9800
- 28 Available for Charter

May:

- 4 Sport Chalet, 818/790-9800
- 5 Available for Charter
- 11 Pacific Sculpins, 213/925-1108
- 12 Sport Chalet, 818/790-9800
- 18 Sport Chalet, 818/790-9800
- 19 Available for Charter
- 25 Sport Chalet, 818/790-9800
- 26 Pasadena Scuba Travel, 818/796-2000
- 27 Available for Charter

Bold Contender,

818/366-2611

22nd St. Landing
65/34 Divers/Capt. Jerry Shapiro
Call for available dates.

Cee Ray, 213/519-0880,

213/867-9738

22nd St. Landing
65/32 Divers/Capt. Arnold Lancaster,
Tom Matlock

March:

- 9 Santa Barbara: Sport Chalet, 818/790-9800
- 10 Santa Barbara: Marina del Rey Divers, 213/827-1131
- 16 Catalina: Sport Chalet, 818/790-9800
- 23 Catalina: Sport Chalet, 818/790-9800
- 30 Catalina: Sport Chalet, 818/790-9800

Charisma, 213/832-8304,

213/326-7460

22nd St. Landing

78/35 Divers/Capt. John Hess
Call for available dates.

Encore, 213/832-8304,

213/326-7460

22nd St. Landing
78/35 Divers/Capt. Randy Beaver
Call for available dates.

Golden Doubloon,

714/963-4378

22nd St. Landing
65/34 Divers/Capt. Greg Elliott
(Charters exclusively to Catalina.)
Call for available dates.

Magician, 213/548-6129

22nd St. Landing
65/35 Divers/Capt. Ira Burdine
Call number above for open boats.

March:

- 2 Catalina: Scuba Haus, 213/828-2916
- 3 Catalina: Scuba Toys, 714/527-0430
- 9 Santa Barbara: Scuba Locker, 714/653-1255
- 10 Catalina: Sport Chalet, 818/790-9800
- 16 Santa Barbara: Scuba Adventures, 714/825-2502
- 17 Catalina: Divers West, 818/796-4287
- 23 Catalina: Scuba Habitat, 714/594-7927
- 24 Catalina: American Diving, 213/326-6663
- 30 Catalina: Scuba Haus, 213/828-2916
- 31 Scuba Toys, 714/527-0430

April:

- 6 Santa Barbara: Scuba Locker, 714/653-1255
- 7 Catalina: Scuba Toys, 714/527-0430
- 13 Catalina: Sport Chalet, 818/790-9800
- 14 Olympic Wreck: Reef Seekers, 213/652-4990
- 20 Catalina: Scuba Habitat, 714/594-7927
- 21 Catalina: Divers West, 818/796-4287
- 27 Catalina: Scuba Haus, 213/828-2916
- 28 Catalina: American Diving, 213/326-6663

May:

- 4 Santa Barbara: Scuba Locker, 714/653-1255
- 5 Catalina: Scuba Toys, 714/527-0430
- 11 Catalina: Divers West, 818/796-4287
- 12 Catalina: Sport Chalet, 818/790-9800
- 15 Chamber Day: Sport Chalet, 818/790-9800
- 18 Catalina: American Diving,

213/326-6663

19 Catalina: Scuba Haus,
213/828-2916

25-26 Outer Islands: Reef Seekers,
213/652-4990

27 Len Tillim, 213/973-5175

Maverick, 213/547-3824

22nd St. Landing
58/25-30 Divers/Capt. Floyd Bryan
Call for available dates.

Scuba Queen, 213/548-5324

Cabrillo Marina
65/33 Divers/Capt. Ed Lord
Listed charters destined for Catalina.
Call for available dates.

Westerly, 213/833-6048

22nd St. Landing
55/30 Divers/Capt. Jim Ingram
Call above number for open boats.

March:

- 2 San Nicolas: Dive 'n Surf, 213/372-8423
- 3 John Roodenberg, 213/536-0404
- 9 San Nicolas: Douglas Dive Club, 714/895-4076
- 10 Catalina/Backside: Dive 'n Surf, 213/372-8423
- 16 San Nicolas: Dive 'n Surf, 213/372-8423
- 17 San Nicolas: Golden Reef Divers, 818/443-2103
- 20 San Nicolas: Dive 'n Surf, 213/372-8423
- 23 San Nicolas: Desert Divers, 805/947-0863
- 24 Mr. Scuba, 714/838-6483
- 30 Catalina/Backside: Hughes Dive Club, 213/324-8583
- 31 B.E.N.T., 213/375-7121

April:

- 6 San Clemente: Dive 'n Surf, 213/372-8423
- 7 Sea Sabres, 213/947-0625
- 13 Begg Rock: Douglas Dive Club, 714/895-4076
- 14 Catalina/Backside: Dive 'n Surf, 213/372-8423
- 20 Santa Barbara: Golden Reef Club, 818/443-2103
- 21 Catalina/Backside: Dive 'n Surf, 213/372-8423
- 27 Santa Barbara: Dive 'n Surf, 213/372-8423
- 28 Santa Barbara: Desert Divers, 805/947-0863

May:

- 4 San Clemente: Douglas Dive Club, 714/895-4076
- 5 Catalina/Backside: Dive 'n Surf, 213/372-8423
- 11 Santa Barbara: Dive 'n Surf, 213/372-8423
- 12 Mr. Scuba, 714/838-6483
- 18 John Roodenberg: 213/536-0404
- 19 Catalina/Backside: Dive 'n Surf, 213/372-8423
- 25 San Clemente: Hughes Dive Club, 213/324-8583
- 26 Mr. Scuba, 714/838-6483
- 27 Catalina/Backside: Dive 'n Surf, 213/372-8423
- 30 Close Charter

Wild Wave, 213/534-0034

22nd St. Landing
65/26 Divers/Capt. Mickey Pittman
Call for available dates.

LONG BEACH

Mr. C, 213/831-9449

Long Beach Sportfishing
50/40 Divers/Capt. Tom Rossin
Call for available dates.

Sundiver, 213/493-0951

Seaport Village
53/28 Divers/Capt. Rich Wallace
Call number above for open boats.
Dates not listed are open for charter.
Sundiver will be operating out of Mexico
January-February, 1991.
Call for more information.

March:

- 2 Ski & Sport, 714/633-1880

Continued

3 West Coast Divers,
818/708-8137
9 Marineers, 213/594-8360
10 Pacific Sporting Goods,
213/434-1604
16 Pacific Sporting Goods,
213/434-1604
19 Open Boat
23 Ski & Sport, 714/633-1880

AVALON HARBOR

King Neptune, 213/510-2616
65/30 Divers/Capt. Bob Kennedy
Call for available dates.

SAN DIEGO

America II, 619/584-0742
Islandia Sportfishing Landing,
Mission Bay
35/17 Divers/Capt. Rich Cassens
Call number above for open boats or
group charter info.

March:

2 Wreck Alley
3 Kelp Forests
4-8 Open Days
9 Wreck Alley
10 Kelp Forests
11-15 Open Days
16 Kelp Forests
17 Wreck Alley
18-22 Open Days
23 Wreck Alley
24 Kelp Forests
25-29 Open Days
30 Wreck Alley
31 Kelp Forests

April:

1-5 Open Days
6 Wreck Alley
7 Kelp Forests
8-12 Open Days
13 Kelp Forests
14 Wreck Alley

15-19 Open Days
20 Wreck Alley
21 Kelp Forests
22-26 Open Days
27 Kelp Forests
28 Wreck Alley
29-30 Open Days

May:

1-3 Open Days
4 Wreck Alley
5 Kelp Forests
6-10 Open Days
11 Kelp Forests
12 Wreck Alley
13-17 Open Days
18 Wreck Alley
19 Kelp Forests
20-24 Open Days
25 Kelp Forests
26 Wreck Alley
27-31 Open Days

Bottom Scratcher,

619/459-2691

Pt. Loma Sportfishing
63/21 Divers/Capt. G. Humphries

March:

2-3 San Clemente: Scuba Science,
602/995-5926
9 Coronados: Scuba Science,
602/995-5926
16-17 San Clemente: Scuba Science,
602/995-5926
18-20 Cortes/San Clemente: Thunder
Island, 801/776-6316
23-24 San Clemente: Scuba Science,
602/995-5926
29-31 San Clemente: Scuba Science,
602/995-5926

April:

6 Coronados: Scuba Science,
602/995-5926
7 Coronados: Adventures in Div-
ing, 714/499-4517
13-14 San Clemente: Scuba Science,
602/995-5926
17 Shark Adventures: Sea & See,
619/484-1718

20-21 San Clemente: Scuba Science,
602/995-5926
27-28 San Clemente: Scuba Science,
602/995-5926

May:

4-5 San Clemente: Scuba Science,
602/995-5926
11-12 San Clemente: Scuba Science,
602/995-5926
15-17 Shark Adventures: Sea & See,
619/484-1718
18-19 San Clemente: Scuba Science,
602/995-5926
25-27 San Clemente: Scuba Science,
602/995-5926

Horizon

619/277-7823
H & M Landing
78/35 Divers/Capt. Greg Grivetto
Call for available dates.

Sand Dollar

619/224-4997

Pt. Loma Sportfishing
65/28 Divers/Capt. Bill Johnston

March:

2 Coronados: La Jolla Divers,
619/459-2691
3 Coronados: Ocean Ent.,
619/942-3661
4-6 Cortes/San Clemente: Ocean
Ent., 619/942-3661
9-10 Cortes/San Clemente: Diving
Locker, 619/272-1120
16 Coronados: P&L, 602/343-1500
17 Coronados: Diving Locker,
619/272-1120
18-20 Cortes/San Clemente: Discover
Diving, 503/257-0669
24-26 Closed Charter
30 Coronados: Waterworld,
602/763-5531

April:

6 Coronados: Diving Locker,
619/272-1120
14 Coronados: Ocean Ent.,
619/942-3661
20 San Clemente: Diving Locker,
619/272-1120

21 Coronados: San Diego Divers,
619/224-3439

May:

4 Coronados: P&L, 602/343-1500
5 San Clemente: Ocean Ent.,
619/942-3661
12 Coronados: La Jolla Divers,
619/459-2691
19-20 San Clemente: Colo-Riv-Val,
619/326-3232
26 Coronados: Diving Locker,
619/272-1120
27 Coronados: Ocean Ent.,
619/942-3661

Spear Gunner

619/486-3402
San Diego Princess Resort
33/6 Divers/Capt. Bob Nelson
Operates 7 days a week.
Call number above for open boats/group
discounts.

March:

2 Kelp Forests & Wrecks: Open
Boat
3 Kelp Forests & Wrecks: Open
Boat
9 Kelp Forests & Wrecks: Rick's
Diving Locker, 619/746-8980
10 Kelp Forests & Wrecks: Open
Boat
16 Kelp Forests & Wrecks: Open
Boat
17 Kelp Forests & Wrecks: Open
Boat
23 Coronados: Rick's Diving
Locker, 619/746-8980
24 Kelp Forests & Wrecks: Open
Boat
30 Kelp Forests & Wrecks: Open
Boat
31 Kelp Forests & Wrecks: Open
Boat

April:

6 Kelp Forests & Wrecks: Open
Boat
7 Kelp Forests & Wrecks: Open
Boat

13 Kelp Forests & Wrecks: Open
Boat
14 Coronados: Rick's Diving
Locker, 619/746-8980
20 Kelp Forests & Wrecks: Open
Boat
21 Kelp Forests & Wrecks: Open
Boat
27 Kelp Forests & Wrecks: Open
Boat
28 Kelp Forests & Wrecks: Rick's
Diving Locker, 619/746-8980

WASHINGTON

Sea Wolf

206/293-4248
Cap Sante Boat Haven
55/18 Divers/Capt. Jess & Allan Starnes
Available weekdays.
Call above number for open boats or
group charter information.

March:

2-3 San Juan Islands
9-10 San Juan Islands
17-21 San Juan Islands
30-31 San Juan Islands

April:

6-7 San Juan Islands
13-14 San Juan Islands
20-21 San Juan Islands
27-28 San Juan Islands

May:

4-5 San Juan Islands
11-12 San Juan Islands
18-19 San Juan Islands
25-27 San Juan Islands

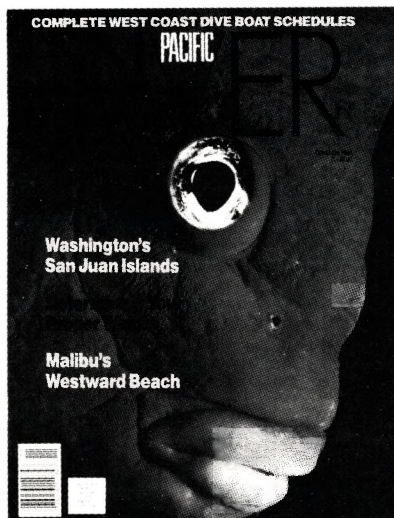
Star Fire

206/364-9858
Cap Sante Marina
54/24 Divers/Capt. Gordon Bradley
Call for available dates.

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2F109

Submersible Systems' Spare Air Model 270

Submersible Systems' Spare Air alternate air systems have been around for awhile now. We had an opportunity to try out the company's newest model, the 3000 Series Model 270 which offers 2.7 cubic feet of air for divers who happen to find themselves in out-of-air situations. Submersible Systems claims the Model 270, while two inches smaller, offers 60 percent more air than the standard model. Also, the on/off flip valve has been redesigned to make it easier to activate, even when wearing gloves.

What exactly does 2.7 cubic feet mean when you're at depth with an empty air cylinder? Tossing all the charts and graphs of explanation aside, we descended to 100 feet, steadied our breathing, exhaled in a relaxed manner as if we expected to get another breath off our regulator second stage — then let go of it. Grabbing the Spare Air from its pouch strapped to our BC, we flipped the on/off lever to activate the unit, took a breath and started for the surface. Keeping our ascent rate under control (the dive computer's "rapid ascent" beeper only went off twice), we reached the surface with a couple of breaths to spare.

Granted, this was no "panic" situation, our breathing was calm and controlled and we didn't make a safety stop, but those considerations aside, we were able to get from 100 feet to the surface on this small bottle of air, and that's good enough for us.

The Model 270 package comes with the Spare Air unit itself, a velcro holster and an adapter that enables you to refill the unit from your own personal air cylinder. This is a great idea, because if you drain the 270 you're supposed to refill it immediately, and this way you don't have to run down to your dive store for a 30-second fill.

The problem is, this personal refill system involves too much guesswork. According to the directions, you basically connect the adapter, flip the lever on, open the tank valve *SLOWLY*, fill the unit and you're done. Sounds simple enough.

Except that it's crucial that you fill the unit *SLOWLY*, and that you refrain from overfilling the bottle or you'll rupture its safety burst disc.

Which is exactly what we did. After attaching the adapter, we cracked the tank valve just a tad, felt the Model 270 heat up as it filled and were just starting to wonder how we could tell when the bottle was full



Superb alternate air source, but watch out for those refills!

when suddenly the safety burst disc ruptured with a terrifying "blamm!" that sent us leaping frantically around the room counting our fingers.

So what we want to know is, how slow is "slowly," and how are you supposed to know when the Model 270 is full?

In all fairness, we consulted with two other Spare Air owners. It turns out that they were able to fill their 270s without breaking anything, although they both said the process had the hair on the backs of their necks tingling. So perhaps we

somehow made a mistake. But it wouldn't hurt if the filling instructions were fleshed out a bit, better explaining how to gauge the rate of a fill and how to tell when the bottle is full, if that's possible. But, of course, that's above and beyond the performance of the Model 270 itself, which was outstanding.

The Spare Air Model 270 package carries a suggested retail price of \$258. For more information, contact Submersible Systems Inc., 18112 Gothard St., Huntington Beach, CA 92648; (714) 842-6566. ★★★★★½

Tabata's Mesh Gear Bag

For storing and transporting wet diving equipment, you really can't do better than a mesh gear bag. Actually, for local boat diving excursions Tabata's mesh bag is a little small to be used as a primary dive bag when you consider having to haul around quarter-inch wetsuits. It really shines, however, when it's used as an auxiliary gear bag during diving vacations.

When traveling, we use a big back-mounted gear bag in which we stuff all our diving gear (along with a folded up Tabata mesh bag) as well as clothes and anything else we can cram into it to cut down on bags we have to lug around airports. Once we get to our destination and are ready to hit the water, we pull out the mesh bag

and fill it only with the gear we're going to want to take with us on the dive that day. Our room keys and wallets fit perfectly into a moisture-proof inside pocket, we don't have to get our main gear bag/suitcase wet, we don't have to haul everything we own down to the dive boat every day, and the mesh feature enables us to avoid bringing too much of that tropical ocean home with us after each dive.

Carrying a suggested retail price of only \$42, Tabata's mesh bag can be used as a secondary dive bag locally, and it can take a lot of the headaches out of dive traveling. For more information, contact Tabata USA, 2380 Mira Mar Ave., Long Beach, CA 90815; (213) 498-3708. ★★★★★½



A good secondary wet bag; a great vacation dive bag.

Continued

Underwater Kinetics' Q40 Dive Light

One of the neat things about today's generation of compact dive lights is that they're delivering a heck of a lot of candlepower in very small packages. Underwater Kinetics' Q40 pocket light is no exception.

Powered by four C batteries, the Q40 produces a vibrant white-hot light beam, quite surprising for such a small light. It fits well in the hand, and is small enough to store in a BC pocket when not in use.

Its size and lighting abilities make it a perfect daytime light for poking around in holes in reefs, but it casts a powerful enough beam that it could probably be used as a night light as well, although it does throw a much narrower beam than more traditional night lights.

The divers we encountered who owned Q40s said they used them primarily as day lights, and then as back-up lights to larger, more powerful lights during night dives.

The only thing we didn't like about the Q40 was the positioning of the on/off switch. Although we're at a loss to suggest another place to put it, the switch is in a somewhat awkward position on the light,



Intense candlepower in a compact pocket light.

which caused us to have to alter our grip on the handle to activate it. No big deal, but occasionally frustrating. Also, the Q40

doesn't have an on/off switch lock (we've noticed this on a number of pocket lights lately). While the light never switched on or off on us when it wasn't supposed to, we found ourselves feeling a need to check and double check that the light didn't accidentally switch on after we shoved it into a BC pocket or in a diving bag.

The Q40 comes in a variety of fluorescent colors. Although Underwater Kinetics was unwilling to give us a suggested retail price on the light, we found it runs in the \$35 to \$45 range. For more information, contact Underwater Kinetics at 1020 Linda Vista Dr., San Marcos, CA 92067; (619) 744-7560. ★★ ★ ½

Pacific Diver's Product Review Rating System

- ★★★★★ Outstanding product. Real state-of-the-art perfection!
- ★★★★ A great product, making diving more fun, and a lot easier.
- ★★★ A good product. Solid and functional.
- ★★ A real disappointment
- ★ Forget about it.

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Aug 25-Sep 1: *Truk Aggressor*, \$2,195.

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Nov 16-23: *Cayman Aggressor III*, \$1,595.

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ADVERTISING INDEX

AB Sea Photo	23
ALM Airlines	11
America II Scuba Diving Charters	61
Aggressor Fleet	9
Beuchat	64
Black Bart's Aquatics	40
Camera Tech	48
Catalina Diving Resorts	40
Cayman Caribbean Ventures	43
Club Nautico	19
Coco View Resort	46
Divers Alert Network	18
Dolphin Divers	42
The Dive Boat 'Peace'	10
Golden Doubloon Charters	61
Hawaiian Dive Connection	24, 25
M. Holt Marketing Concepts	43
Jim Church Undersea Photography	31, 60
Kona Aggressor	63
Lahaina Divers	42
Marina Del Rey Divers	61
Pacific Camera Service	60
Port-A-Marine	10
Princeton Tectonics	19
Screen Gems	31
Scuba Voyages	47
Sea Ventures	6
Sherwood West	2
Silent World	60
Small Hope Bay Lodge	23
Tabata USA, Inc.	5
Tropical Adventures	47
Woman Diver	31

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SOB

Cont'd from page 51

I give Bob my number again, grab a fin, pull it on and *pow!* the strap breaks.

No, I haven't got an extra strap. Bob looks hard at me, but says nothing. Another diver offers me a spare strap with the somber expression of a child who's found out that Santa Claus is really just daddy. *Get me off this boat!*

Gravity does, and once again I enter a beautiful peaceful, different world. It's funny how stepping off the boat is like stepping into Alice's rabbit hole — suddenly, everything topside ceases to exist!

Unfortunately, in 40 minutes you have to go back to it, and this time I'm really cold. Thank God the galley serves up hot coffee, hot cocoa and hot apple cider, all of which I start pouring down my throat. I turn to see the Chief sipping a cold, free soda. Isn't he...? No, don't ask.

And that's how it was diving with PACIFIC DIVER. Great diving, a friendly crew, a nice bunch of people, and the Chief. I got even colder on the boat ride home, although I was wearing practically all the clothes I own. No problem for the Chief, though, in his cozy new apres-dive coat, which looks like what the Minnesota Vikings wear on the sidelines when it's snowing. Full-length. Fur-lined. With a hood. A wonderful coat.

It was when the Chief said, "You're cold? I'm perfectly warm," that I suddenly understood. The Chief isn't as insensitive as he sounds. He just can't imagine how anyone else can be cold when he's not. If he knew how cold I was, I'm sure he'd give me that coat.

Yeah, that's it. And thanks to that telepathic tape, I could now help him get in touch with his true feelings. This was a job for Brain Power.

And this time it worked. I know it because when we got back to the dock and the Chief took off that wonderful coat so he could pack the rest of his dive gear, he placed it *right next to my gear bag!*

Now what could be more clear than that? No doubt about it, that coat was mine. And to think, all it took was for me to send the Chief the right telepathic message.

Of course, hot-footing it to my car with the coat tucked under my arm wasn't a bad idea, either. Fortunately, it's the experienced diver who knows how to be quick off the boat. ☐

John Francis is PACIFIC DIVER's S.O.B. contributing editor, who will be spending his time looking at the local diving scene until he can sneak back to the Sea of Cortez.

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April 20 Liberty
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March 19

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April 16

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Semicossyphus pulcher

Phylum: Chordata

Class: Osteichthyes

Order: Perciformes

Family: Labridae

Article and photos by
David Wrobel

Imagine going to sleep as a female, only to wake up transformed into an aggressive, ornery male. While not quite this drastic, sheephead do undergo remarkable sexual reversals over a period of only several weeks. Members of the wrasse family, dominant female sheephead seven or eight years old engage in these irreversible sex changes when males are in short supply. A change of color from the female's uniform red to the distinctive black head and tail and reddish middle of the male, along with the formation of a fleshy lump on the male's forehead, mark the conversion.

Sheephead inhabit rocky bottoms of kelp forests from Monterey Bay to central Baja (as well as in deeper waters in the Sea of Cortez), and are seen frequently throughout the Channel islands. However, populations have declined somewhat in Southern California in recent years, due in part to heavy spearfishing.

Most wrasses are bucktoothed, and sheephead are no exception. A passing sheephead presents a taunting toothy grin. The forward-projecting teeth are well-suited for dislodging various types of sea urchins, mollusks, echinoderms and crustaceans, foods that many other fish are ill-equipped to handle. Hard shells and spines are no match for a sheephead's powerful jaws which effortlessly crush the chunky morsels using tooth plates located in the rear of the mouth.

Dominant males breed with a number of females within a localized area during spring and summer. Following courtship, thousands of eggs are cast into the sea to face the daunting rigors of a planktonic existence. The tiny percentage of larvae that survive grow into juveniles that dart about in the shadows of the kelp forests, their bodies a pale red with white stripes coursing down each side and black splotches on the fins. Sheephead lucky enough to evade natural predators and the spearfisherman's arrow can live for 50 years or more, and rare males can reach close to a meter in length. The vibrant colors and distinctive look of the sheephead bring variety to life in the kelp forest. □

David Wrobel is an aquarist and biologist at the Monterey Bay Aquarium, with a special interest in life in kelp forests.



Above: Juvenile sheephead. Below: Adult female sheephead.

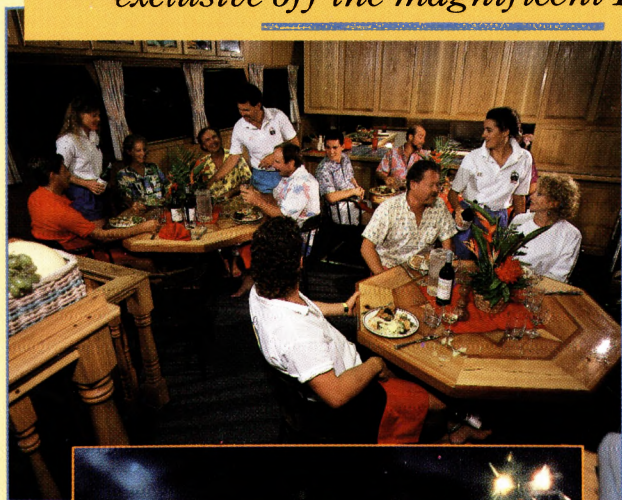


Below: Adult male sheephead.

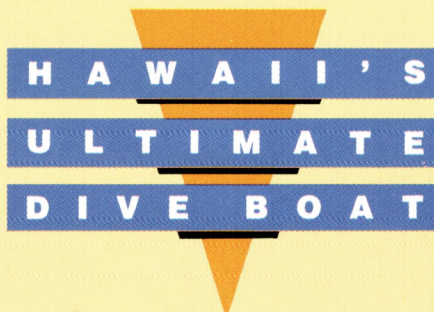




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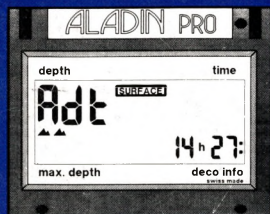
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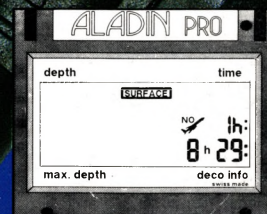
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THERE ARE LEADERS AND THERE ARE FOLLOWERS

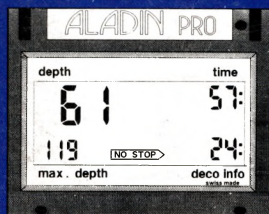
ALADIN PRO by BEUCHAT



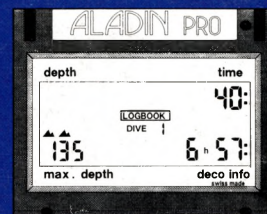
SURFACE MODE indicating altitude sector and adaptation time when diving at altitudes.



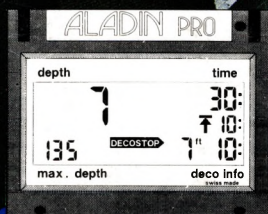
SURFACE MODE after 10 minutes of surfacing flight restriction and total time of desaturation are displayed.



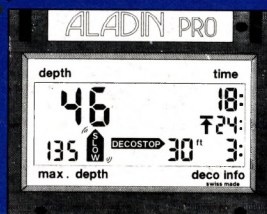
DIVING MODE below depths of 3 feet the Aladin Pro displays all pertinent information related to NoDECOSTOP current depth, max depth and dive time.



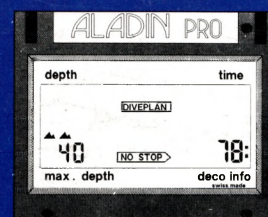
LOGBOOK the logbook will display a total of 9 dives to include, dive number max depth-dive time-surface interval-and altitude sector when diving at high altitudes. Ascent rate and decostop alarms are also displayed if activated during dive.



DECOMPRESSION STOP INDICATOR after the No-Deco time limit has exceeded the DECOSTOP arrow appears indicating required decompression. Stop depth, time, and total time of ascent are also displayed.



ASCENT RATE ALARM when the recommended rate of ascent of 33 feet/min is exceeded a black upward pointing arrow flashing SLOW appears followed by an ACOUSTIC beep warning of a too rapid ascent rate.



DIVE PLAN for repetitive dive planning the Aladin Pro will display Non-decompression time limits in 10 feet increments from 30 feet to 140 feet and current altitude sector if diving at altitude



Available Hose-mount console colors.



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